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Service Manual

ORDER NO.
CRT 1238

MULTI-CD CONTROL FM/MW/LW TUNER DECK AMPLIFIER

KEH-M7001B X1B

KEH-M5001B X1B

MULTI-CD CONTROL FM/MW/LW TUNER DECK

KEX-M801 X1B

Note:

- This service manual is designed to be used together with Model KEH-M7000B/EW, KEH-M5000B/EW and KEX-M800/EW.

Modle	Service Manual	Order No.
KEH-M7001B/X1B	KEH-M7000B/EW	CRT1235
KEH-M5001B/X1B	KEH-M5000B/EW	CRT1236
KEX-M801/X1B	KEX-M800/EW	CRT1234

- Refer to it for finding parts numbers and adjustment, etc. which are not shown in this manual.
- X1B model and EW model use the same schematic circuit diagram and connection diagram. Refer to EW model.

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KEH-M7001B

PACKING METHOD

• Parts List (Page 49)

			KEH-M7000B/EW	KEH-M7001B/X1B
Mark	No.	Description	Part No.	Part No.
	1	Carton	CHG1596	CHG1619
	4-1	Owner's Manual	CRD1290	CRD1299
		Owner's Manual	CRD1291	— Deleted
	4-4	Card		
	5	Styrofoam(R)	CHP1217	CHP1227
	6	Cover	CEG-114	CEG-173
	7	Styrofoam(L)	CHP1216	CHP1226
	8-2	Fastener (Rough Surface)	CNM1716	CNM1841
	8-3	Fastener(Soft Surface)	CNM1717	CNM1842
	9	Accessory Assy	CEA1448	CEA1456

Accessory Assy(CEA1456)

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw(× 1)	CBA-102		4	Strap(× 1)	CNC-975
	2	Screw(× 1)	CBA1002		5	Bush(× 1)	CNV1009
	3	Cord(× 1)	CDE1289		6	Nut(× 2)	NF50FMC

CHASSIS EXPLODED VIEW

• Parts List (Page 37)

			KEH-M7000B/EW	KEH-M7001B/X1B
Mark	No.	Description	Part No.	Part No.
◉	6	Mechanism Control Unit	CWM1968	CWM2025
	13	Insulator		
◉	14	FM/AM Tuner Unit	CWE1146	CWE1164
	20	Insulator		
◉	22	Display Unit	CWS1145	CWS1146
	34	Insulator		
	61	Grille Assy	CXA2937	CXA3060
	69	Heat Sink		
	105	Insulator		
◉	112	Tuner Amp Unit	CWM1843	CWM1846
◉	118	Handle Assy	CXA2944	CXA3105
	121	Box	CNB1273	CNB1271
	123	Screw	CBA1073	CBA1097

Note:

- Although X1B and EW models carry different Part No. for No. 6 Mechanism Control Unit, the unit itself is identical.
- Although X1B and EW models carry different Part No. for No. 14 FM/AM Tuner Unit, the unit itself is identical.
- Although X1B and EW models carry different Part No. for No. 118 Handle Assy, the assy itself is identical.
- Since X1B and EW models use different Insulator (No. 34), Part No. for No. 22 Display Unit is different from each other.

KEH-M5001B

PACKING METHOD

• Parts List (Page 59)

			KEH-M5000B/EW	KEH-M5001B/X1B
Mark	No.	Description	Part No.	Part No.
	1	Carton	CHG1599	CHG1620
	4-1	Owner's Manual	CRD1290	CRD1299
		Owner's Manual	CRD1291	— Deleted
	4-4	Card		
	5	Styrofoam(R)	CHP1217	CHP1227
	6	Cover	CEG-114	CEG-173
	7	Styrofoam(L)	CHP1216	CHP1226
	9	Accessory Assy	CEA1448	CEA1456

Accessory Assy(CEA1456)

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw(× 1)	CBA-102		4	Strap(× 1)	CNC-975
	2	Screw(× 1)	CBA1002		5	Bush(× 1)	CNV1009
	3	Cord(× 1)	CDE1289		6	Nut(× 2)	NF50FMC

CHASSIS EXPLODED VIEW

• Parts List (Page 47)

			KEH-M5000B/EW	KEH-M5001B/X1B
Mark	No.	Description	Part No.	Part No.
◉	6	Mechanism Control Unit	CWM1967	CWM2026
	13	Insulator		
◉	14	FM/AM Tuner Unit	CWE1146	CWE1164
	20	Insulator		
◉	22	Display Unit	CWS1145	CWS1146
	34	Insulator		
	61	Grille Assy	CXA2940	CXA3062
	69	Heat Sink		
	105	Insulator		
◉	112	Tuner Amp Unit	CWM1847	CWM1850
◉	118	Handle Assy	CXA2944	CXA3105
	121	Box	CNB1273	CNB1271
	123	Screw	CBA1073	CBA1097

Note:

- Although X1B and EW models carry different Part No. for No. 6 Mechanism Control Unit, the unit itself is identical.
- Although X1B and EW models carry different Part No. for No. 14 FM/AM Tuner Unit, the unit itself is identical.
- Although X1B and EW models carry different Part No. for No. 118 Handle Assy, the assy itself is identical.
- Since X1B and EW models use different Insulator (No. 34), Part No. for No. 22 Display Unit is different from each other.

KEX-M801

CHASSIS EXPLODED VIEW

• Parts List (Page 65)

			KEX-M800/EW	KEX-M801/X1B
Mark	No.	Description	Part No.	Part No.
◉	4	Audio Tuner Unit	CWM1881	CWM1883
◉	35	Mechanism Control Unit	CWM1968	CWM2025
	40	Insulator		
◉	42	FM/AM Tuner Unit	CWE1146	CWE1164
	66	Holder Assy		
	68	Grille Assy		

Note:

- Although X1B and EW models carry different Part No. for No. 35 Mechanism Control Unit, the unit itself is identical.
- Although X1B and EW models carry different Part No. for No. 42 FM/AM Tuner Unit, the unit itself is identical.

HOLDER ASSY AND GRILLE ASSY EXPLODED VIEW

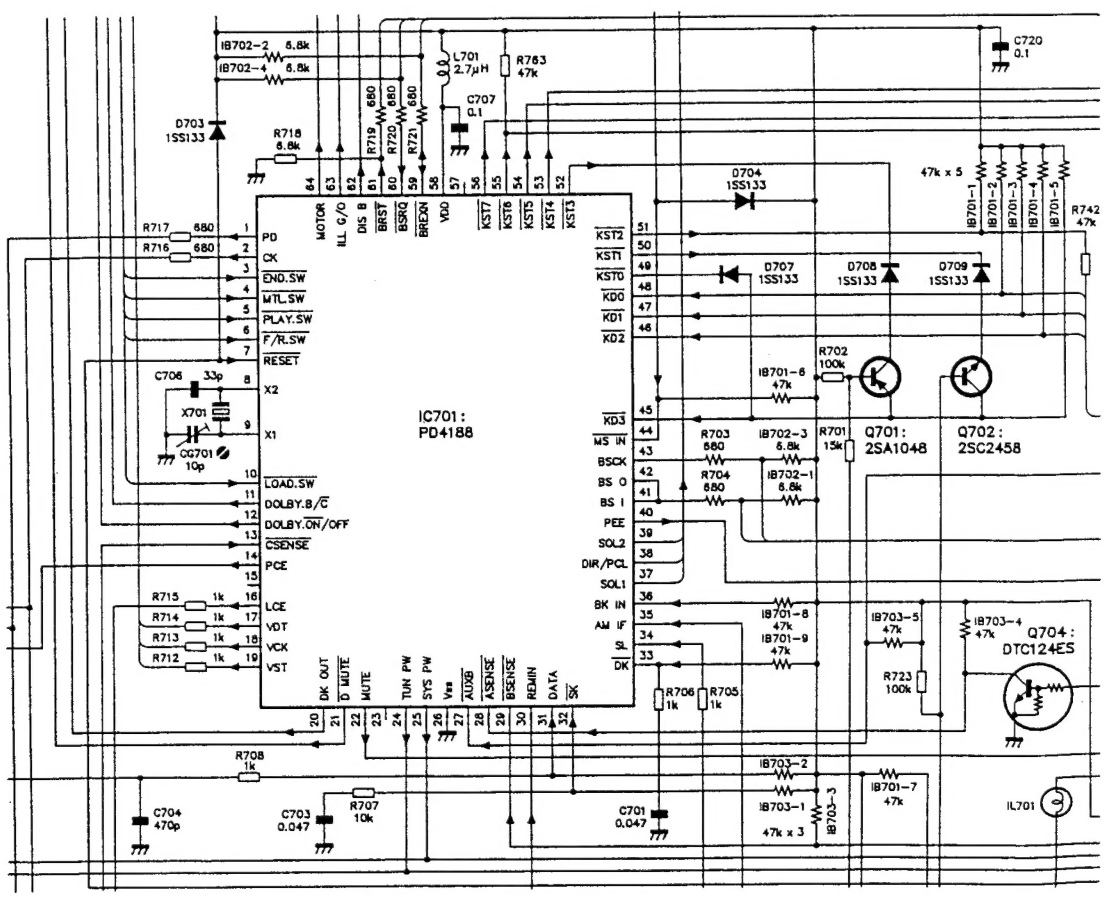
• Parts List (Page 62)

			KEX-M800/EW	KEX-M801/X1B
Mark	No.	Description	Part No.	Part No.
◉	5	Display Unit	CWS1138	CWS1139
	17	LCD	CAW1042	CAW1057
	31	Grille Unit	CXA2834	CXA2835

SCHEMATIC CIRCUIT DIAGRAM

The schematic circuit diagram for KEX-M801/X1B is the same as the KEX-M800/EW except for following point:

• D707 has been added to the KEX-M800/EW(Mother P.C.Board)



ELECTRICAL PARTS LIST

• Parts List (Page 72)

Audio Tuner Unit

		KEX-M800/EW	KEX-M801/X1B
Mark	Circuit Symbol and No.	Part No.	Part No.
*	D707	——	1SS133 Added

Display Unit

		KEX-M800/EW	KEX-M801/X1B
Mark	Circuit Symbol and No.	Part No.	Part No.
	LCD	CAW1042	CAW1057

PACKING METHOD

• Parts List (Page 78)

			KEX-M800/EW	KEX-M801/X1B
Mark	No.	Description	Part No.	Part No.
	1	Carton	CHG1594	CHG1626
	4-2	Fastener(Rough Surface)	CNM1716	CNM1841
	4-3	Fastener(Soft Surface)	CNM1717	CNM1842
	5-1	Owner's Manual	CRD1286	CRD1304
		Owner's Manual	CRD1287	— Deleted
	5-2	Caution Card		
	5-4	Card		
	6	Styrofoam(R)	CHP1212	CHP1232
	7	Cover	CEG1043	CEG-173
	8	Styrofoam(L)	CHP1211	CHP1231
	9	Accessory Assy	CEA1426	CEA1457

Accessory Assy(CEA1457)

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw(×1)	CBA-102		6	Handle(×2)	CNC1631
	2	Screw(×1)	CBA1002		7	Strap(×1)	CNC2840
	3	Screw(×2)	CBA1116		8	Bush(×1)	CNV1009
	4	Spring(×2)	CBH-865		9	Cap(×2)	CNV2156
	5	Cord(×1)	CDE1289		10	Nut(×2)	NF50FMC

PIONEER®
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Service Manual

• KEH-M800/EW

ORDER NO.
CRT 1234

MULTI-CD CONTROL FM/MW/LW (FM/AM) TUNER DECK

KEX-M800 EW, ES, UC
KEX-M800SDK WG

SPECIFICATIONS

General

Power source ..... 14.4 V DC (10.8–15.6 V allowable)
Grounding system ..... Negative type
Weight ..... 1.7 kg (3.7 lbs.)
Tone controls (bass) ..... ±10 dB (100 Hz)
(middle) ..... ±10 dB (1 kHz)
(treble) ..... ±10 dB (10 kHz)
Loudness contour ..... +12 dB (100 Hz), +7 dB (10 kHz) (volume: −30 dB)

Output impedance ..... 1 kΩ

KEX-M800SDK/WG, KEX-M800/EW

Max. current consumption ..... 1.0 A
Dimensions (chassis) ..... 180(W) × 50(H) × 152(D) mm
(front face) ..... 188(W) × 58(H) × 12(D) mm
Maximum output level ..... 250 mV

KEX-M800/ES, KEX-M800/UC

Dimensions (chassis) ..... 178(W) × 50(H) × 155(D) mm [7(W) × 2(H) × 6-1/8(D) in.]
(nose) ..... 170(W) × 46(H) × 10(D) mm [6-3/4(W) × 1-3/4(H) × 3/8(D) in.]
Preout output level ..... 500 mV

Tape player

Tape ..... Compact cassette tape (C-30—C-90)
Tape speed ..... 4.76 cm/sec. (+0.14 cm/sec., −0.05 cm/sec.)
Fast forward/rewind time ..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.08% (WRMS)
Frequency response ..... Metal: 25—22,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio ..... Metal: Dolby C NR IN: 73 dB (IHF-A network)
Dolby B NR IN: 67 dB (IHF-A network)
Dolby NR OUT: 61 dB (IHF-A network)

FM tuner

Frequency range (KEX-M800SDK/WG, KEX-M800/EW) ... 87.5—108 MHz
Frequency range (KEX-M800/ES, UC) ..... 87.9—107.9 MHz (200 kHz)
(KEX-M800/ES) ..... 87.5—108 MHz (50 kHz)
Usable sensitivity ..... 11 dBf (1.0 μV/75Ω, mono)
50 dB quieting sensitivity ..... 16 dBf (1.7 μV/75Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 25—15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

KEX-M800/UC

Selectivity ..... 80 dB (2ACA)
Three-signal intermodulation (desire signal level) ..... 45 dBf (two undesire signal level: 110 dBf)

MW (AW)-Tuner

Frequency range (KEX-M800/ES, UC) ..... 530—1,710 kHz (10 kHz)
(KEX-M800SDK/WG, KEX-M800/EW, ES) ..... 531—1,602 kHz (9 kHz)
Usable sensitivity ..... 18 μV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±10 kHz)
50 dB (±9 kHz)

LW-Tuner (KEX-M800SDK/WG, KEX-M800/EW)

Frequency range ..... 153—281 kHz
Usable sensitivity ..... 30 μV (30 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:
Specifications and the design are subject to possible modification without notice due to improvements.

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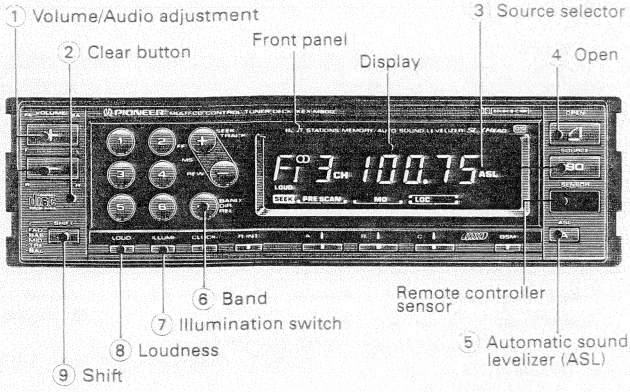
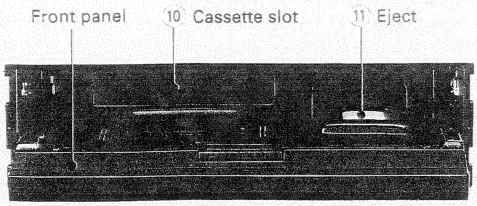
X-M800

CONTENTS

1. ADJUSTING VOLUME AND TONE



KEX-M800/EW



Using the Clear Button

Once all wiring is complete, press button ② with a thin, pointed object. Though not a normal occurrence, the microprocessor which controls the operation of this unit can be affected by electrostatic noise. This generally is indicated by such symptoms as no power being supplied when you switch the unit on, failure of buttons and controls, or an abnormal display. Should this happen, press button ② with a thin, pointed object to reset the microprocessor. Note that doing so also resets all audio controls, so you will have to make any desired settings again. This operation deletes all memory contents, such as frequencies stored in the preset memory, so you will have to make any desired settings again.

Switching Power On

Tuner

Press button ③ to switch the tuner power on. Press button ③ again to switch the power off.

Tape

Press button ④ to open the front panel, and load a cassette in through cassette slot ⑩. The cassette will play. To eject the cassette, press button ④ to open the front panel and press button ⑪.

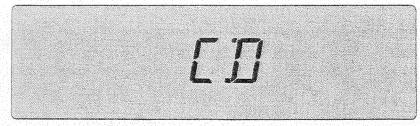
Note:

- None of the operation buttons except button ⑪ work while the front panel is open. Use the control buttons after shutting the front panel.
- During operation, the power to this unit is turned off if the engine is started or if the ignition is turned off then to ACC or ON again while the front panel is open. In this case, close the front panel to resume operation.

Source Selector

When a cassette is loaded and button ③ is pressed, the source shifts in the order tape → tuner → power off. If this unit is combined with a multi-play CD player sold separately such as CDX-M70, or if a CD player is connected to the auxiliary input (AUX), the source shifts in the order multi-play CD player → tape → tuner → AUX (CD player).

- If a CD player is connected to the auxiliary input (AUX), the power to this unit will not switch off, even if button ③ is pressed, when the CD player is operating. To switch the power off, stop the CD player.
- When the source is switched to AUX (CD player), the display indicates CD.



Adjusting Audio

Press button ① to adjust the volume. Each press of button ⑨ changes the display and the function of button ① as follows:

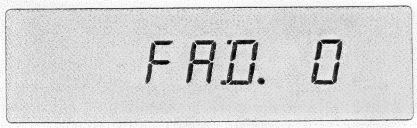
Volume → Fader → Bass → Middle → Treble → Balance

Adjusting Volume

Pressing the (+) side of button ① increases the volume, while the (–) side decreases it.

Adjusting the Fader

This function controls the balance between the front and rear speakers of a 4-speaker system. Pressing the (+) side of button ① shifts the balance to the front speakers, while the (–) side shifts it to the rear speakers.
For 2-speaker systems, set FAD. 0.

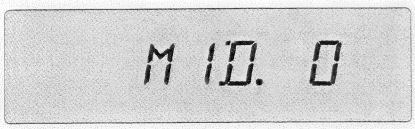


Adjusting Bass

Pressing the (+) side of button ① increases bass, while the (–) side decreases bass.

Adjusting Middle

Pressing the (+) side of button ① increases middle, while the (–) side decreases middle.

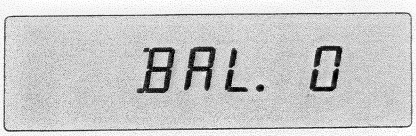


Adjusting Treble

Pressing the (+) side of button ① increases treble, while the (–) side decreases treble.

Adjusting Balance

Pressing the (+) side of button ① shifts the balance to the left speaker, while the (–) side shifts it to the right speaker.



- When you're adjusting fader, bass, middle, treble, or balance settings, the indicator will stop at the center setting. About 5 seconds after adjustment has been made, the display returns to its previous state.

ASL (Automatic Sound Levelizer)

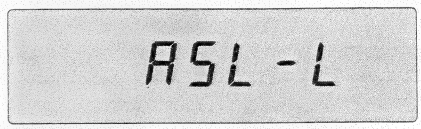
Press button ⑤ to operate ASL (automatic sound levelizer). ASL monitors the noise inside the vehicle, which changes according to the driving speed and the road conditions, and automatically increases the volume when the noise increases. (ASL is shown on the display.)

- At high volume, ASL automatically reduces the selected intensity if it will make the volume too loud.
- If ASL operates and the volume becomes too high, the sound may be distorted. In this case, reduce the volume.

ASL Intensity Selection

ASL has three different intensity modes (increases in volume according to noise). The greatest increase is obtained with ASL-H, followed by ASL-M, then ASL-L.

1. Hold down button ⑤ for at least 2 seconds. The current ASL mode will be shown on the display for about 5 seconds.



(Example: ASL-L)

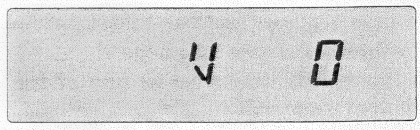
2. While the display indicates an ASL mode, press either the (+) or (–) side of button ① to change the ASL mode.

- About 5 seconds after the ASL mode has been changed, the display returns to the previous indication.

Using Source Level Adjuster

You may wish to adjust volume when you have changed the source to radio, tape, or CD or when you have changed the radio band from FM to MW/LW. You can do so on the basis of the volume of FM as follows:

1. Use the button ③ to change the source. (In case of radio, change the band to MW/LW.)
2. Hold down the button ⑨ for about 2 seconds, and the display will show you the volume of the source.



3. To increase the volume, press the (+) side of the button ①, and to decrease press the (–) side. You can adjust the volume within a span of V -4 and V 4. The display automatically returns to the previous showing when five seconds have elapsed after the adjustment.

- No adjustment can be made when an FM station is tuned in.

Using the Loudness Function

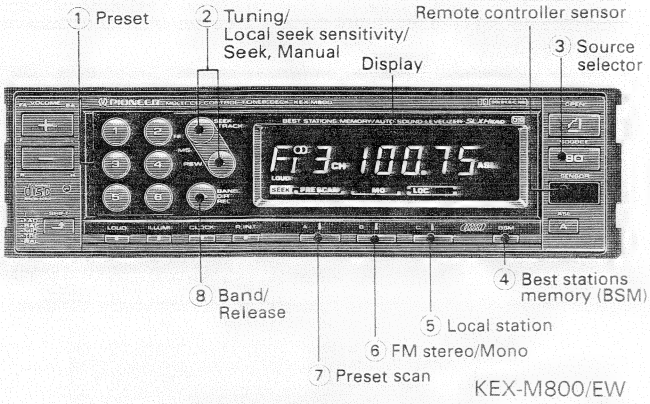
Press button ⑧ and the LOUD indicator will appear on the display. This "loudness" function enhances both the high and low ranges of sound to give even more power to output even at low volumes.

Switching Illumination Colour

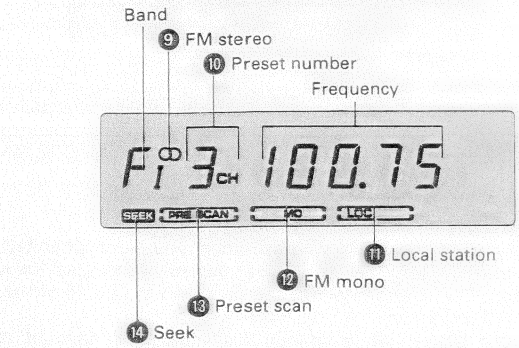
Press button ⑦ to switch illumination colour between green and amber. Pressing clear button ② causes the illumination to be turned amber.

X-M800

2. USING THE TUNER



KEX-M800/EW



1 Press button ③ to switch the tuner power on.

2 Press button ⑧ to select a band.

$F_I \rightarrow F_{II} \rightarrow F_{III} \rightarrow M/L$
(FM1) (FM2) (FM3) (MW/LW)

Use button ② to switch between MW (531–1,602 kHz) and LW (153–281 kHz).

3 Use seek tuning to tune in a frequency.

Confirm that the SEEK indicator ⓮ is shown on the display (if not, press the (+) and (–) sides of button ② at the same time).

Press the (+) side of button ② to automatically tune in the next higher receivable frequency, and the (–) side for a lower frequency.

4 Adjust volume and tone (see page 2).

5 Assign the tuned frequency to one of the buttons in bank ① (preset memory).

Press and hold down one of the buttons in bank ① for at least two seconds. The frequency is assigned to the selected button when the preset number ⓾ stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3) and six MW/LW stations can be assigned to the preset memory buttons in bank ①.

6 Once a frequency is assigned to a button in bank ①, you just need to press that button to tune it in.

This also causes the number of the button pressed to appear at position ⓾ on the display.

Preset Scan Tuning

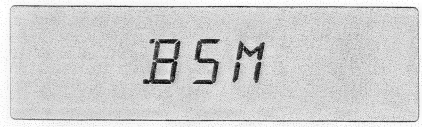
This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press button ⑦. (Bar ⓭ appears.) Preset number ⓾ flashes and each station in the memory for button ① is sequentially called for 8 seconds.
2. When you hear a station that you like, press button ⑦ again to cancel preset scan tuning and remain at that station.

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in bank ①, from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button ⑧ and select a band.
2. Hold down button ④. After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, BSM will flash on the display.



3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in bank ①.

- At the end of the BSM search, the displayed frequency is that assigned to button ⑥ of bank ①.
- If there are fewer than six strong stations in the area, some of the buttons in bank ① will not be assigned frequencies, so they will retain any frequencies assigned to them previously.
- BSM search may take as long as 30 seconds in areas where there are few strong stations.
- You can cancel BSM search by pressing button ⑧.

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Press both (+) and (–) sides of button ② at the same time to clear SEEK ⓮.
2. Each press of the (+) side of button ② increases the frequency in 50 kHz steps in the FM band, 9 kHz in the MW band and 1 kHz in the LW band. Pressing the (–) side of button ② decreases the frequency. Holding down either side of button ② changes the frequency at high speed.

Switching between FM Stereo and Mono

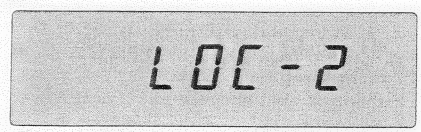
Generally, it is best to allow the ARC (Automatic Reception Control) function to automatically set the optimum listening conditions. When there is a large amount of noise, you can press button ⑥ for clearer, mono reception (bar ⓬ appears).

Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for MW/LW to match local conditions.

Changing the Local Seek Sensitivity

1. Use button ⑧ to select a band.
2. Hold down the button ⑤ for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.



(Example: LOC-2)

3. While the local seek sensitivity remains on the display, press the (+) side of button ② to increase the sensitivity level, and the (–) side to decrease the level as shown below.

   FM : LOC-1⇄LOC-2⇄LOC-3⇄LOC-4
   MW/LW : LOC-1⇄LOC-2

   The LOC-**4** setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

- The display of local seek sensitivity returns to the frequency when about five seconds have elapsed after the change of sensitivity.

Switching between Local and DX

Press button ⑤ to switch between Local and DX (distant) seek tuning.
When bar ⓫ is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

Note on LW Band Seek Tuning

The following shows changes in LW BAND broadcast frequency steps enacted by WARC/1979. The underlined italic figures indicate changes.

A. Up to January 1986
155-164-173-182-191-200-209-218-227-236-245-254-263-272-281

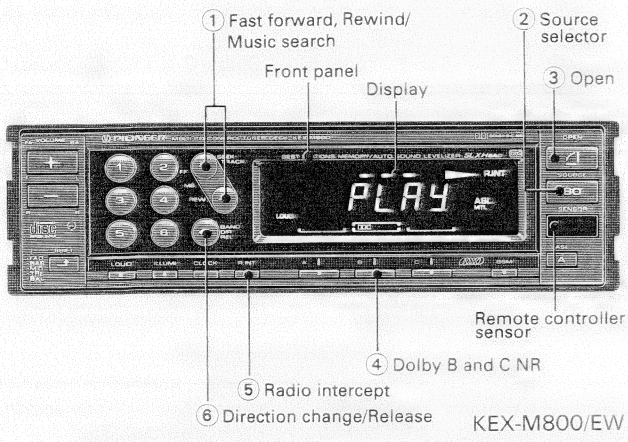
B. From February 1986
153-162-171-180-189-200-209-218-227-236-245-254-263-272-281

C. From February 1988
153-162-171-180-189-*198-207-216-225-234*-245-254-263-272-281

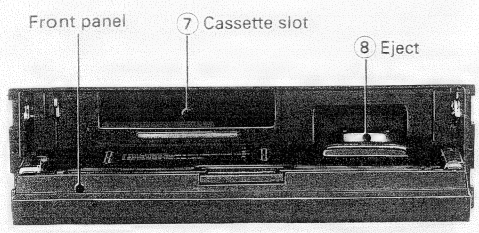
D. From February 1990
153-162-171-180-189-198-207-216-225-234-*243-252-261-270-279*

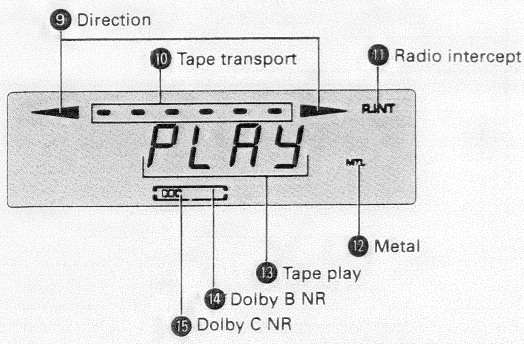
The LW band seek operations of this unit are performed in 9 kHz steps starting from 153 kHz. In the case of C, the first ten frequencies are identical to each station being broadcast, while the remaining five are shifted (2 kHz each). Consequently, manual tuning (in 1 kHz steps) and seek tuning should be used together to tune in the desired LW broadcast. It is also suggested that your favorite LW stations will be memorized for instant recall.

3. USING THE TAPE DECK



KEX-M800/EW





1 Press button ③ to open the front panel.

2 Load a cassette in through the cassette slot ⑦. The cassette will play.
Tape play ⓭, tape transport ⓾, and direction ❾ appear.

3 Close the front panel and adjust volume and tone (see page 2).

4 To stop play halfway, press button ② to switch the function off.
To restart play, press button ② some times until PLAY ⓭ appears on the display. The tape begins playing at the position where it stopped.

5 To eject the cassette, press button ③ to open the front panel and press button ⑧.

Note:

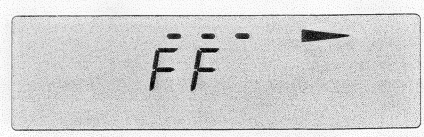
- The power is not switched on even if a cassette is loaded in through cassette slot ⑦, if the engine is started or if the ignition is turned off then to ACC or ON again while the front panel is open. In this case, close the front panel to switch the power on and start play.
- Power is automatically turned off when the cassette tape has not been set within a few seconds. When this happens, remove the tape by pressing the button ⑧ because of a possible trouble with the tape.
- A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.

Changing Program

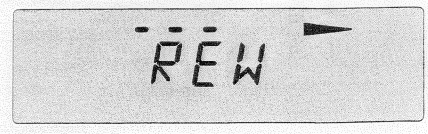
Press the button ⑥ to change the side of tape from A to B or vice versa.

Using Fast Forward and Rewind

1. To fast-forward tape, press the (+) side of the button ①.



To rewind tape, press the (–) side.



2. To release the fast forward or rewind function, press the button ⑥.

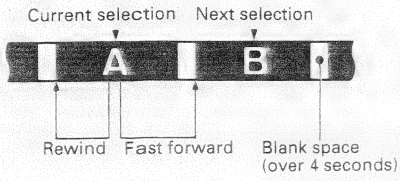
Using Radio Intercept

Use radio intercept to hear radio while fast forward or rewinding.

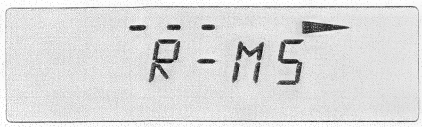
1. Press the button ⑤ (R.INT ⓫ appears) before fast forward or rewinding, and you will hear radio.
2. To release the radio intercept function, press the button ⑤ again.

- The radio intercept does not function when the music search is in operation.

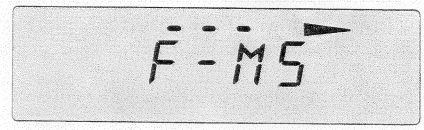
Using Music Search



1. To repeat the current selection (A), press the (–) side of the button ① two consecutive times.



To hear the following piece of music (B) rather than continue the current selection, press the (+) side of the button ① two consecutive times. Pressing the button ① three consecutive times makes the normal sequence of playing resume.



2. To release the music search function, press the button ⑥.

The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- Unrecorded blank portion between selections is less than 4 seconds → the blank portion cannot be detected by the unit.
- Pauses in recorded conversations are longer than 4 seconds → the unit reads these as blanks between selections.
- Portions are recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.

Dolby B and C NR

Press button ④ to listen to a cassette recorded using the Dolby NR system. Each press of button ④ shifts the Dolby NR mode as follows:

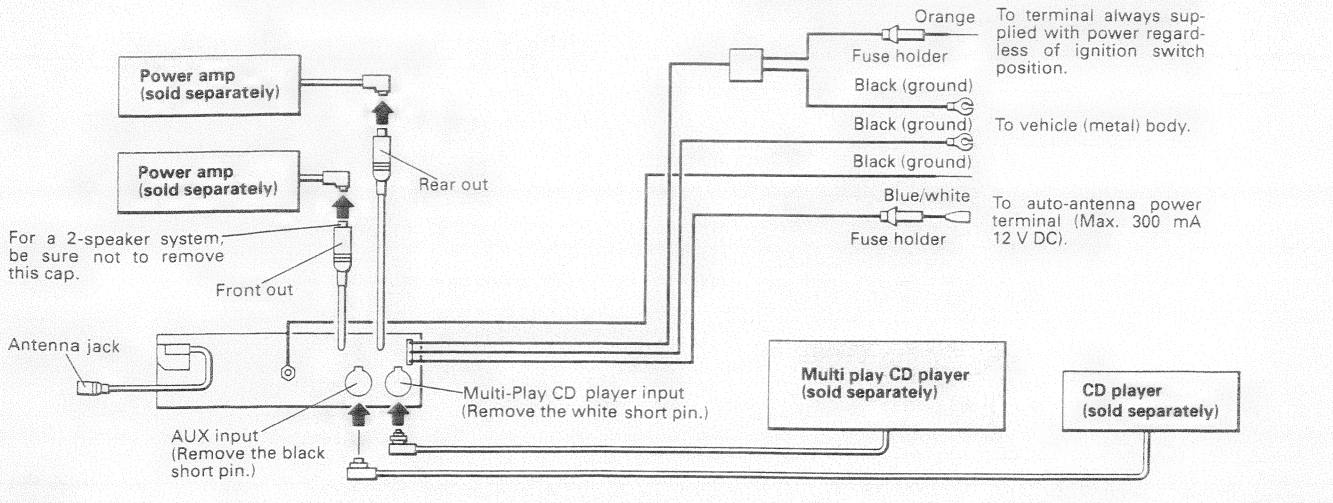
Dolby B NR (Bar ⓮ appears) → Dolby C NR (C ⓯ appears) → Dolby NR off.

Auto Tape Selector

When a cassette tape is inserted, the automatic tape selector determines the tape type, and switches between 70 µs and 120 µs equalization. When it is a metal or chrome tape, MTL ⓬ comes on. When it is a normal tape, nothing comes on.

4. CONNECTING THE UNITS

- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the owner's manual for details on connecting the various cords of the power amp and other units then make connections correctly.
- Be sure to connect the memory power supply lead (orange) to a terminal that is always supplied with power regardless of the vehicle's ignition switch position. If this connection is made incorrectly or is forgotten, the unit will not work at all.
- Don't pass that orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.
- When the multi-play CD player input or the AUX input is not in use, leave the short pin on it.
- For 2-speaker systems, wire the rear output cord to the main amp.



5. DISASSEMBLY

• Removing the Case

1. Insert and turn a flat screwdriver to remove the case.
2. Raise the case to remove.

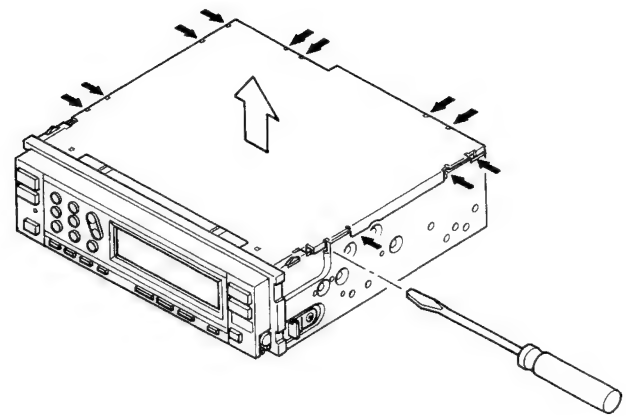


Fig. 1

• Removing the Cassette Mechanism Assy

1. Remove the four screws.
2. Disconnect the mechanism control unit connector.
3. Remove the cassette mechanism assy.

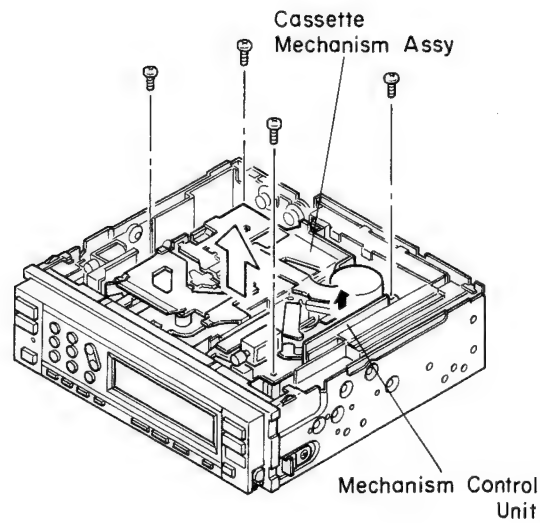


Fig. 2

• Removing the Grille Assy

1. Press the solenoid lever in the direction of the arrow to open the grille assy. (Fig. 3)

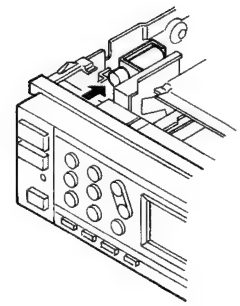


Fig. 3

2. While holding down the lock button, pull the grille assy toward you. (Fig. 4)

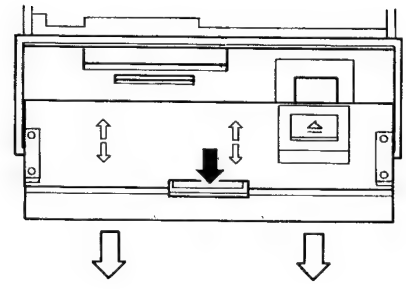


Fig. 4

• Removing the Holder Assy

1. Remove the two screws. (Fig. 5)
2. Disconnect the four connectors. (Fig. 6)
3. Press the tabs at three locations indicated by arrows, and then pull out the holder assy. (Fig. 6)

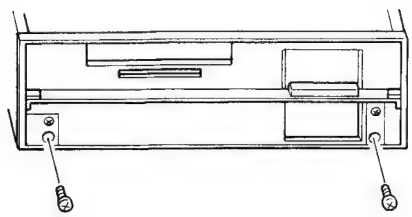


Fig. 5

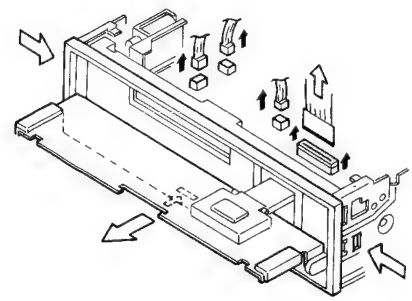


Fig. 6

• Removing the Display Unit

1. Remove the three screws, and then remove the cover unit.
2. Remove the three screws, and then remove the display unit.

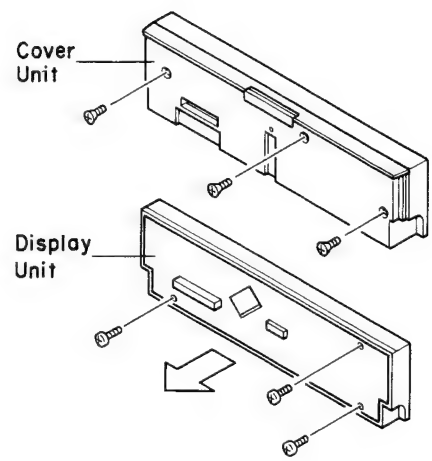


Fig. 7

• Removing the Audio Tuner Unit

1. Remove the three screws A, and then remove the holder.
2. Remove the two screws B.
3. Unbend the tab indicated by arrow until straight.
4. Raise up on audio tuner unit to remove it from chassis unit.

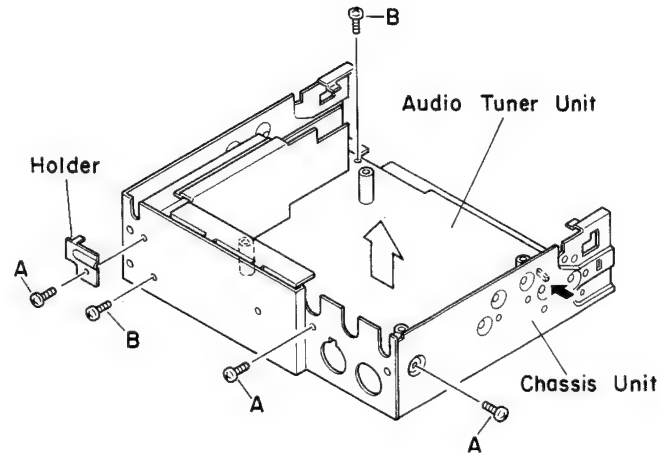


Fig. 8

• Removing the Amp P.C. Board and FM/AM Tuner Unit

1. Remove the solders and unbend the tabs on back of each unit circuit board until straight.
2. Pull out unit as shown in illustration.

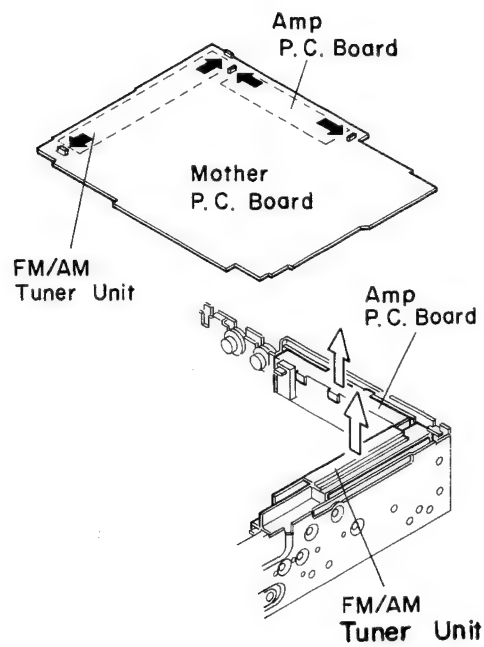


Fig. 9

6. ADJUSTMENT

NOTICE:
Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.
Z: Output impedance of SSG.

- **Connection Diagram**

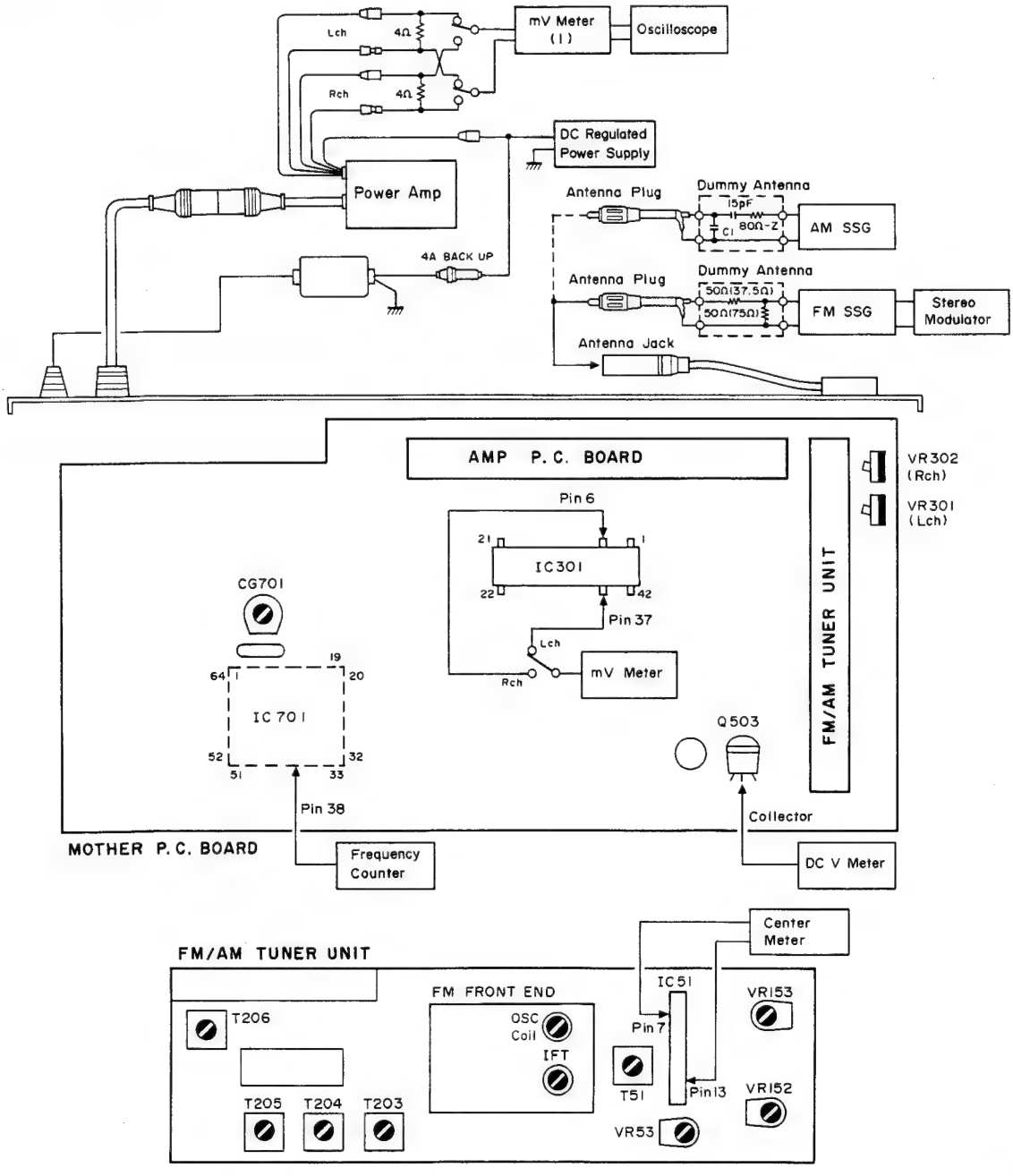


Fig. 10

DOLBY NR LEVEL ADJUSTMENT

No.	Cassette Tape	Adjusting Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR301 (Lch), VR302 (Rch)	mV Meter: -8.2dBs±1dB (Dolby NR Switch: OFF, METAL Switch: OFF)

CLOCK ADJUSTMENT

No.	Adjusting Point	Adjustment Method (Switch Position)
1		Pin 45 of IC701 connect to pin 51 of IC701
2	CG701	Frequency Counter:1,048,576Hz±1Hz

MW/LW ADJUSTMENT (KEX-M800SDK/WG, KEX-M800/EW)

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dBμV)			
Tuning Volt	1	(MW Mode)		1,602	T203	DC V Meter:Less than 7.0V
	2	(LW Mode)		153		Verify that DC V Meter is more than 2.0V
IF	1	999	20—25	999	T204, T205, T206	mV Meter (1) :Maximum

AM ADJUSTMENT (KEX-M800/ES, UC) *:ES model when tuning step at 9kHz.

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dBμV)			
Tuning Volt	1			1,710 *(1,602)	T203	DC V Meter:Less than 7.0V
	2			530 *(531)		Verify that DC V Meter is more than 2.0V
IF	1	1,000 *(999)	20—25	1,000 *(999)	T204, T205, T206	mV Meter (1) :Maximum

FM ADJUSTMENT ※Stereo MOD. :1kHz, L+R=90%, Pilot=10% *:ES model when tuning step at 50kHz.

	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dBμV)			
Tuning Volt	1			108.0 (WG, EW) 107.9 (ES, UC) *(108.0)	OSC Coil (FM Front End)	DC V Meter:7.0V
IF	1	98.1 Unmodulated	60	98.1	T51	Center Meter:0
	2	98.1	5	98.1	IFT (FM Front End)	mV Meter (1) :Maximum
Mute	1	98.1	60	98.1		mV Meter (1) :A dB (This output is A)
	2	98.1	10	98.1	VR53	mV Meter (1) :A-3dB
ARC	1	98.1※	60	98.1	VR153	mV Meter (1) :Separation Maximum (Stereo Position)
	2	98.1※	35	98.1	VR152	mV Meter (1) :Separation 5dB (Stereo Position)

7. CASSETTE MECHANISM DISASSEMBLY

Note: Always use new washer and E washer at the time of reassembling.

• Dismounting the Cassette Holder

1. Remove the three springs.
2. Take off E washer, and then remove the arm unit.
3. Make the claw straight.
4. Shift the cassette holder toward the left and pull it out from above.

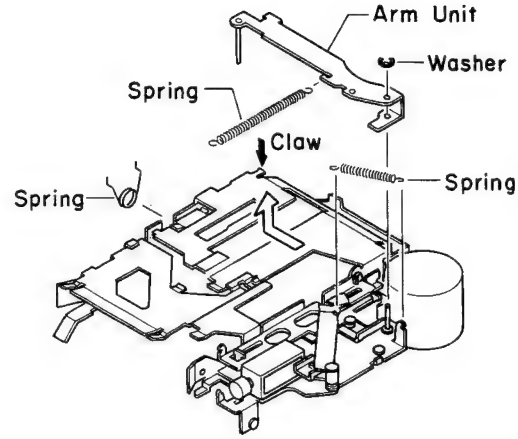


Fig. 11

• Dismounting the Head Unit

1. Remove the two screws, and then remove the guide assy.
2. Remove the two screws, and then remove the head unit.

• Dismounting the Pinch Roller Unit

1. Remove the spring and then remove the pinch roller unit

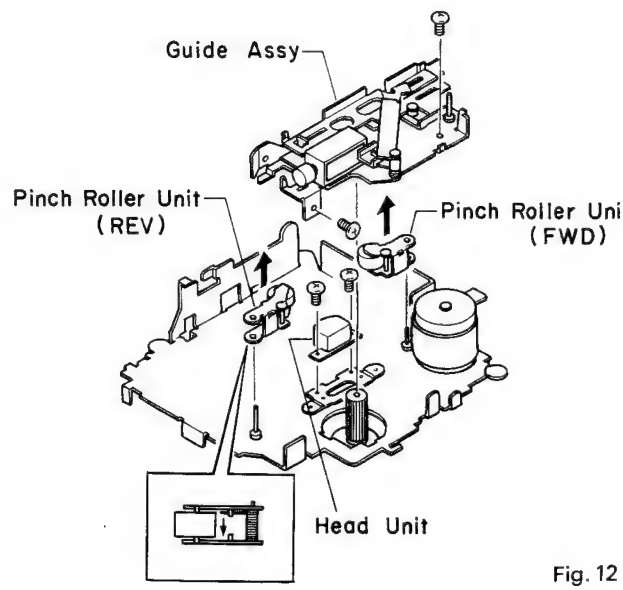


Fig. 12

• Dismounting the Gear (Reel Base)

1. Remove the two screws, and then remove the cover.
2. Remove the collar, and then remove the spring and gear.

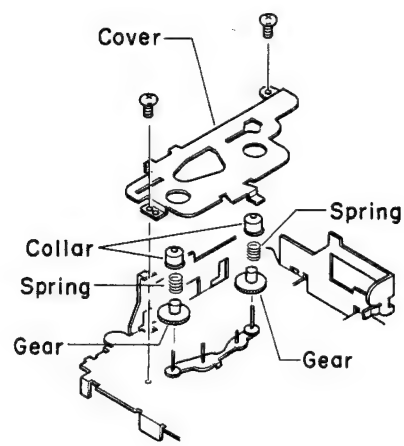


Fig. 13

• Dismounting the Flywheels

1. Remove the two screws, and then remove the cover.
2. Take off E washer. Retain washer properly to ensure it doesn't get lost.
3. Remove the flywheels. Do not mistake the N and R flywheels.

• Dismounting the Motor Unit

1. Remove the two screw, and then remove motor unit.

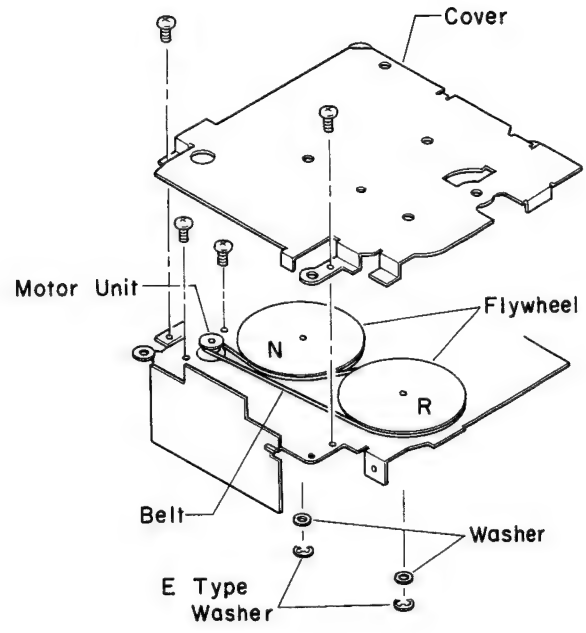


Fig. 14

8. MECHANISM DESCRIPTION

8.1 PARTS LOCATION

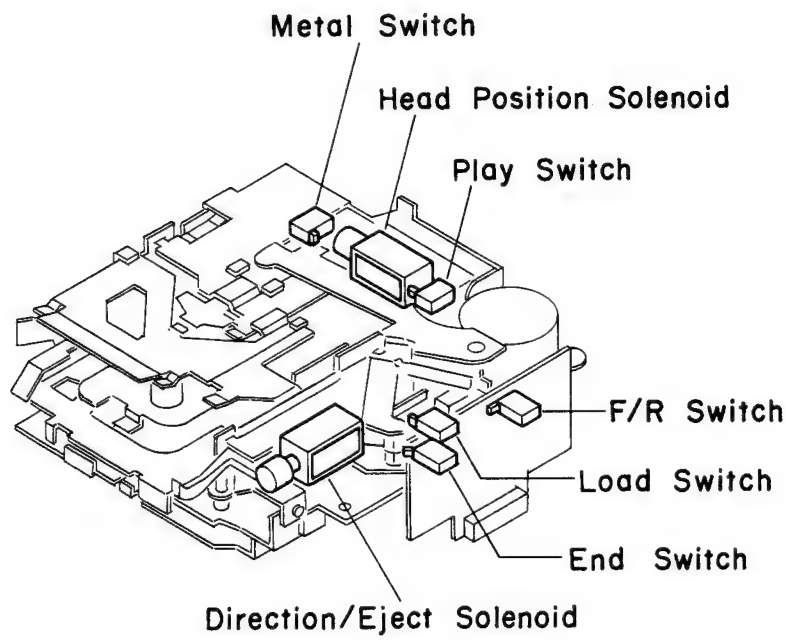


Fig. 15

8.2 DRIVING MECHANISM

• ATSC (EJECT) Mode

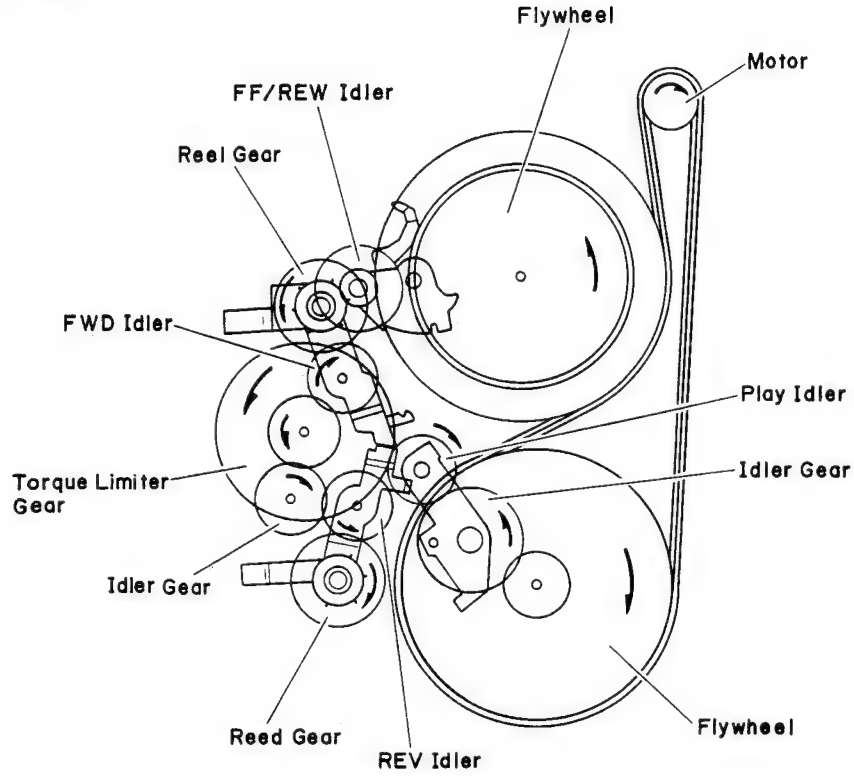


Fig. 16

• FWD PLAY Mode

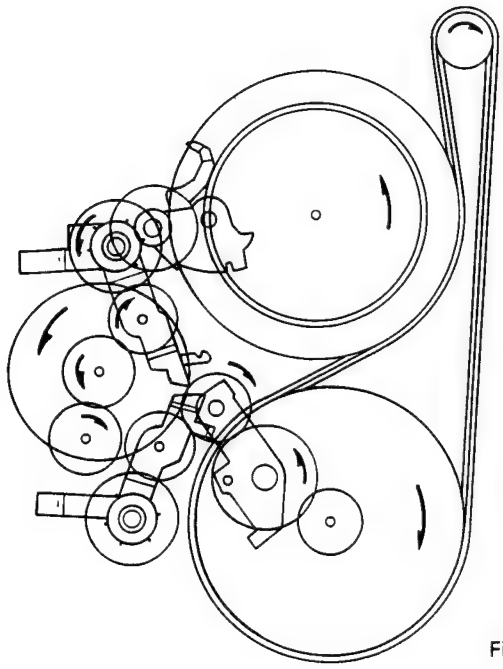


Fig. 17

• REV PLAY Mode

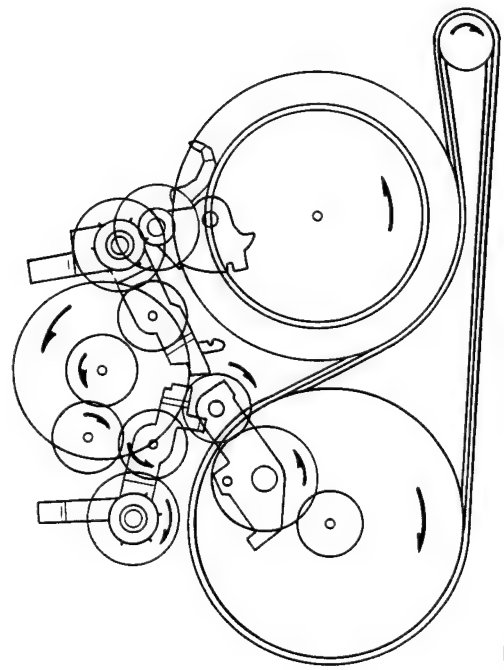


Fig. 18

• **FF Mode**

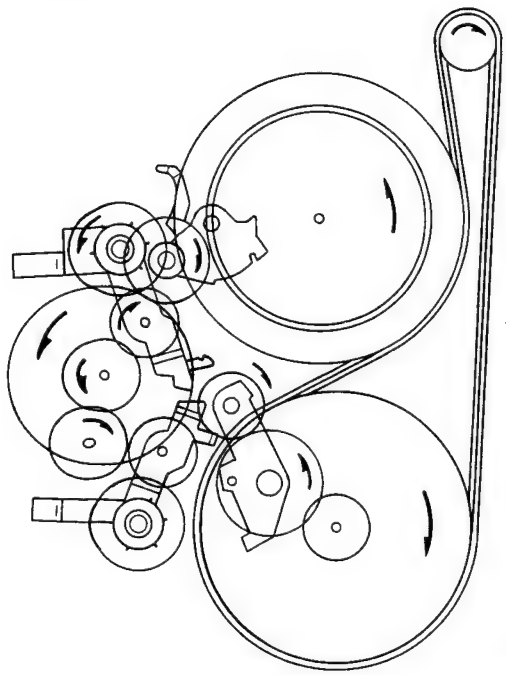


Fig. 19

• **REW Mode**

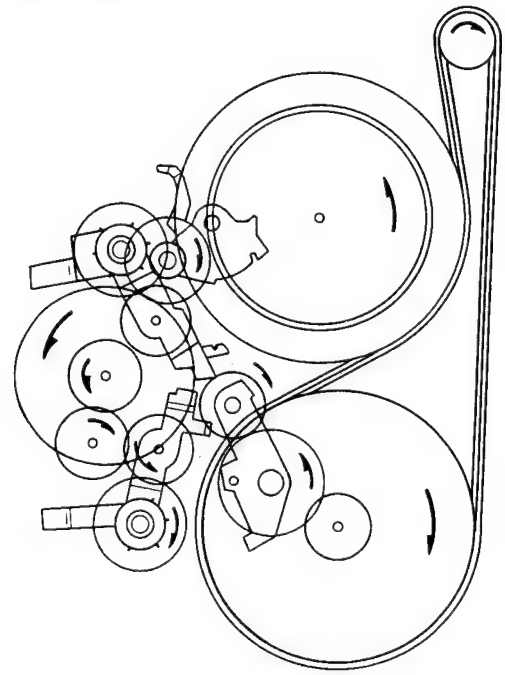


Fig. 20

9. CASSETTE MECHANISM ADJUSTMENT

9.1 AZIMUTH ADJUSTMENT

• **To Adjust**

1. Play "A" side of NCT-110 (10 kHz, −10 dB). Adjust each screw for maximum output in forward and reverse directions.
2. Play "B" side in forward and reverse directions to confirm adjustment.

9.2 TAPE SPEED ADJUSTMENT

• **To Adjust**

1. Reproduce NCT-111 (3 kHz, −10 dB). Adjust the semifixed resistor so that frequency counter shows 3,010 Hz (+80 Hz, −40 Hz).

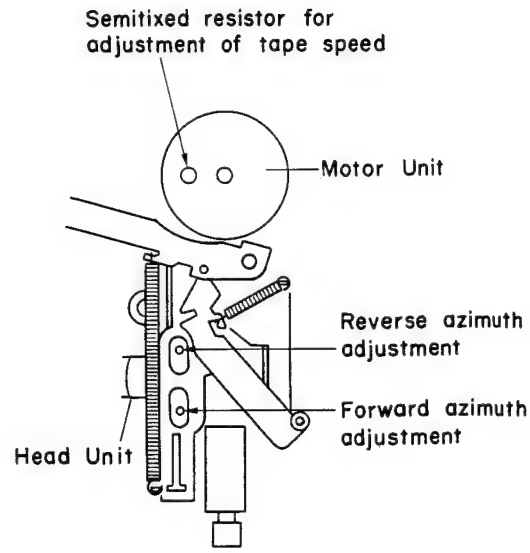


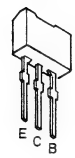
Fig. 21

9.3 CHECK POINTS OF CASSETTE MECHANISM

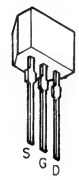
Confirm the following items when replacing parts of the cassette mechanism.	■ Tape speed deviation: 3,000 $^{+90}_{-30}$ Hz (4.76cm/s $^{+3}_{-1}$ %) Using an NCT-111, measure the speed at the start and end of winding and take the maximum value. If values indicated by the pointer vary considerably, adjust to 70% of the minimun and maximum values. Measuring time shall be 5 — 6 seconds.	■ Wow and flutter: Less than 0.18% (WRMS) Using an NCT-111, measure the wow and flutter at the start and end of winding and take the maximum value. If values indicated by the pointer vary considerably, adjust to 70% of the minimum and maximum values. Measuring time shall be 5 — 6 seconds.
■ Fast forward and rewinding time: 95—115 seconds Using a C-60, set to fast forward and rewind, and measure the time with a stop watch.	■ Winding torque: 37—63g • cm Using a cassette type torque meter (100 g•cm), measure the minimum value while in the play mode. Measuring time shall be 2.5 — 6 seconds.	■ F.F. torque: 70—110g • cm Using a cassette type torque meter (120 g•cm), measure the value when the tape stops in the F.F. mode.
■ REW torque: 70—110g • cm Using a cassette type torque meter (120 g•cm), measure the value when the tape stops in the REW mode.	■ Back tension torque: 0.5—5 kg After setting in the REW mode without loading a cassette tape for 5 minutes, measure the back tension torque in the play mode, using a cassette type torque meter.	■ Cassette loading force: Less than 0.5 kg Push the center of the cassette and measure the force with a tension meter (3 kg).

• ICs and Transistors

2SB1243
2SD1859

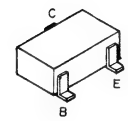


2SK330

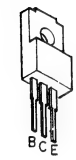


2SJ106

2SC2712
2SC3295
2SC4116



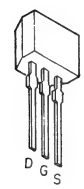
2SB945



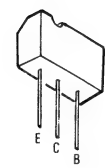
2SK435

2SA1048
2SA1150
2SC2458

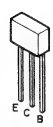
2SK184



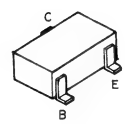
2SC1545F



UN4122
UN4211
UN4212



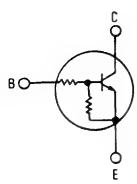
DTC124EK
DTC144EK
DTC343TK



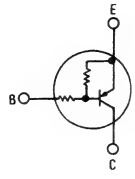
DTA124ES
DTC114ES
DTC124ES
DTC143ES

DTC143TS
DTC144TS
DTC314TS
DTC343TS

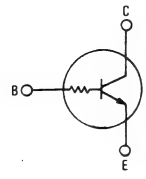
UN4211
UN4212
DTC114ES
DTC124ES
DTC143ES



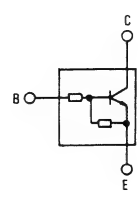
UN4122
DTA124ES



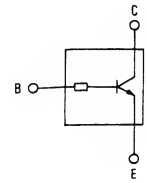
DTC143TS
DTC144TS
DTC314TS
DTC343TS



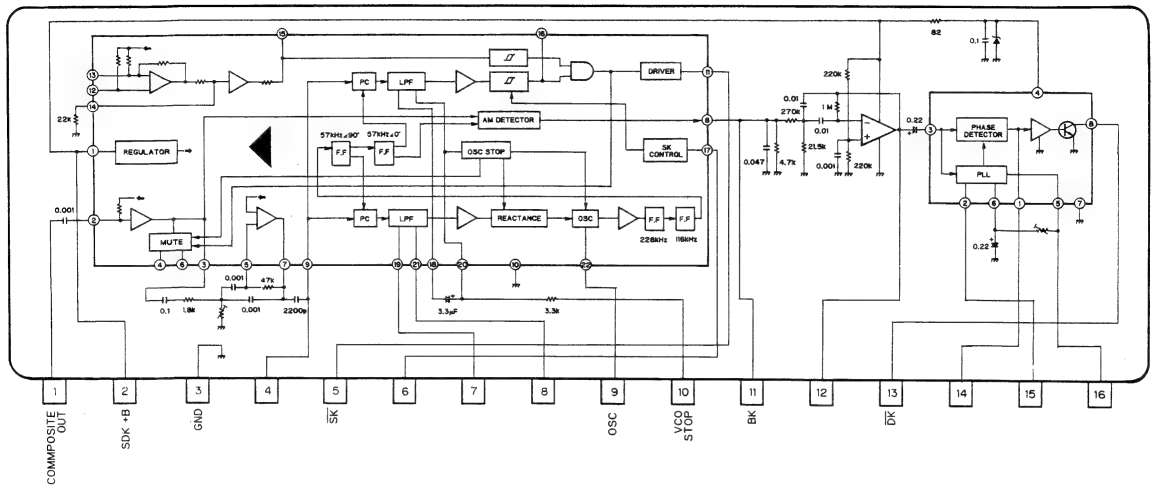
DTC124EK
DTC144EK



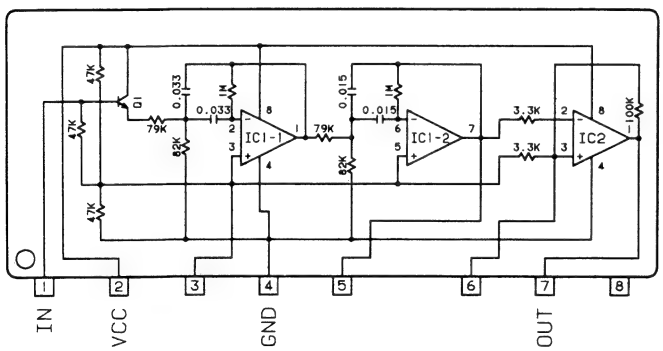
DTC343TK



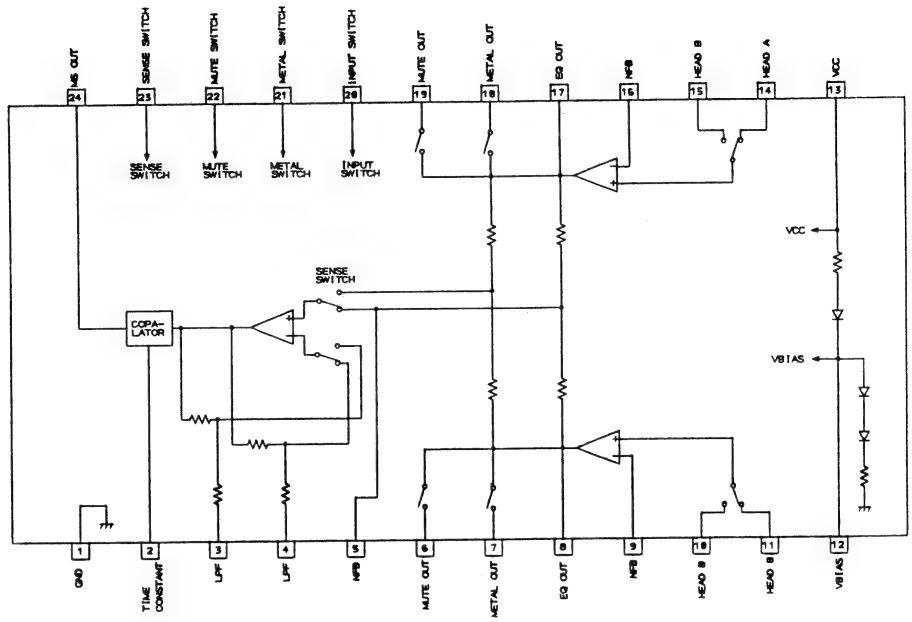
IC501 : KHA142



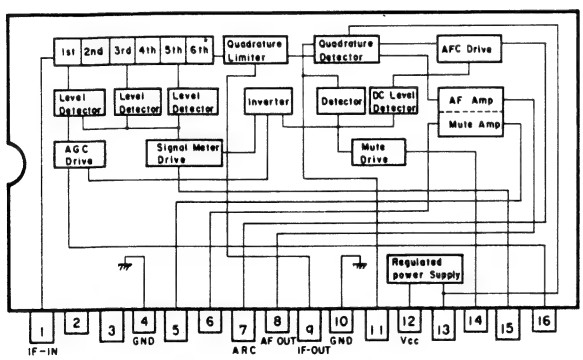
IC502 : CWW1091



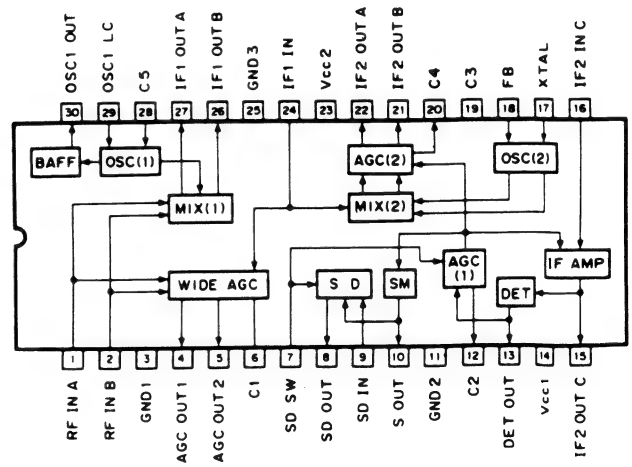
IC1 : BA3430FS



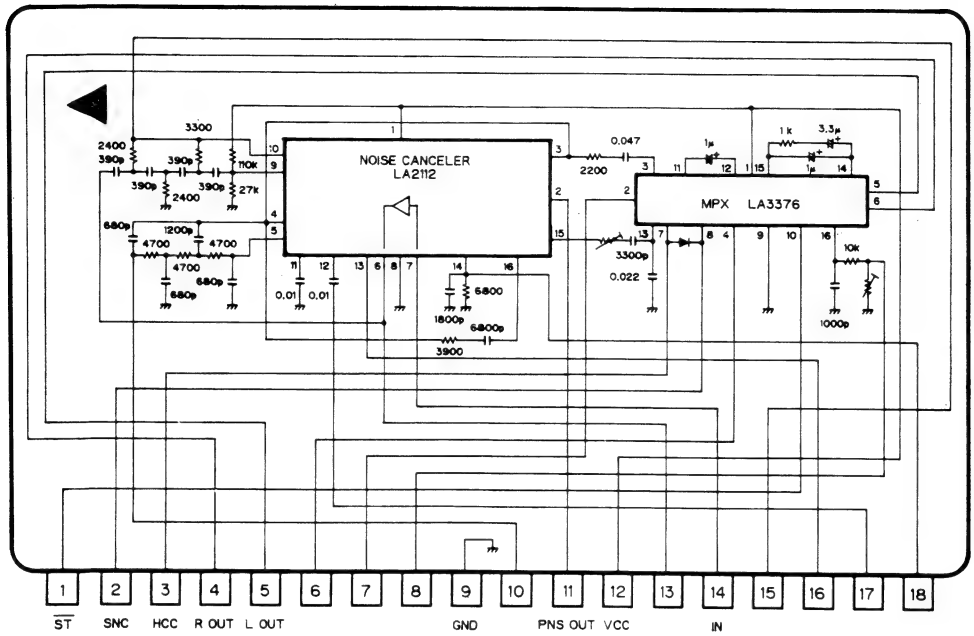
IC51 : LA1140B



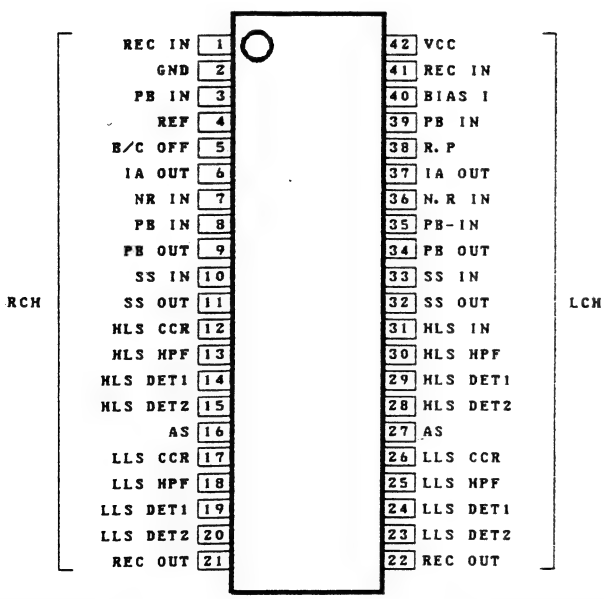
IC201 : PA4010



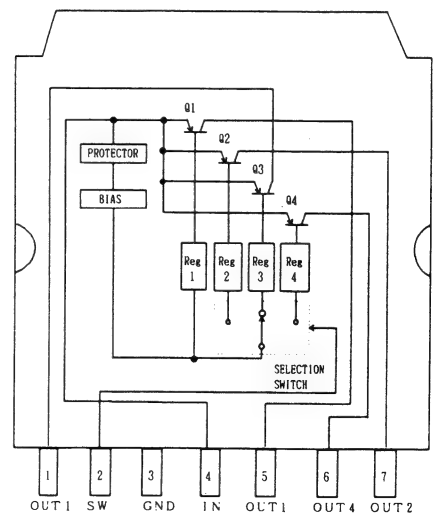
IC101 : KHA146



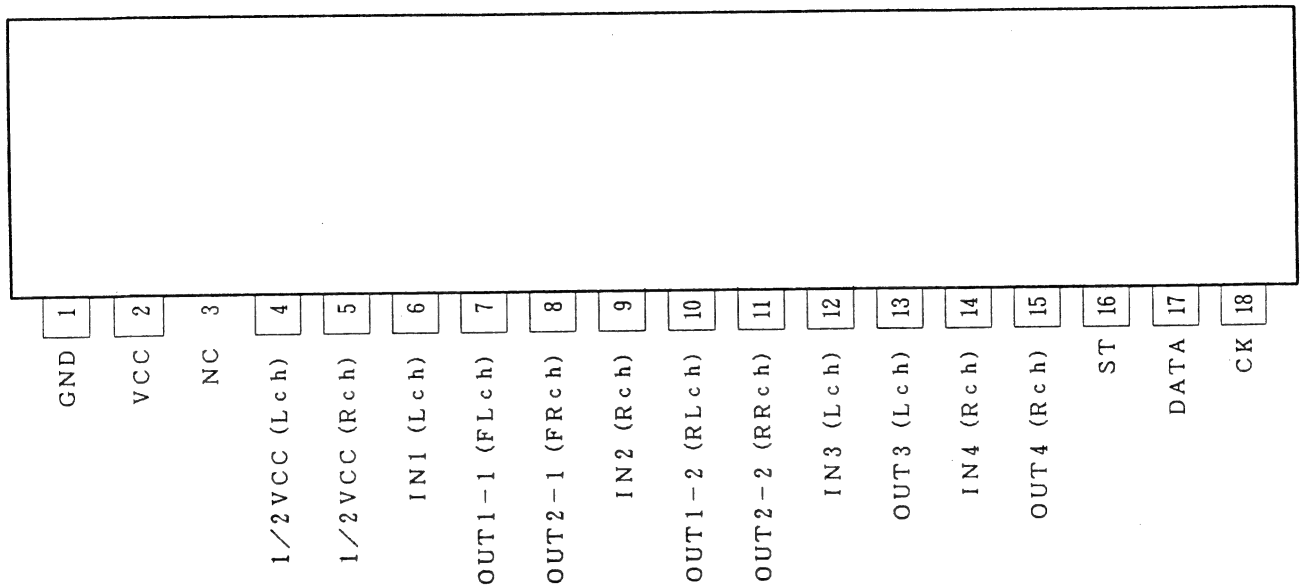
IC301 : HA12088ANT



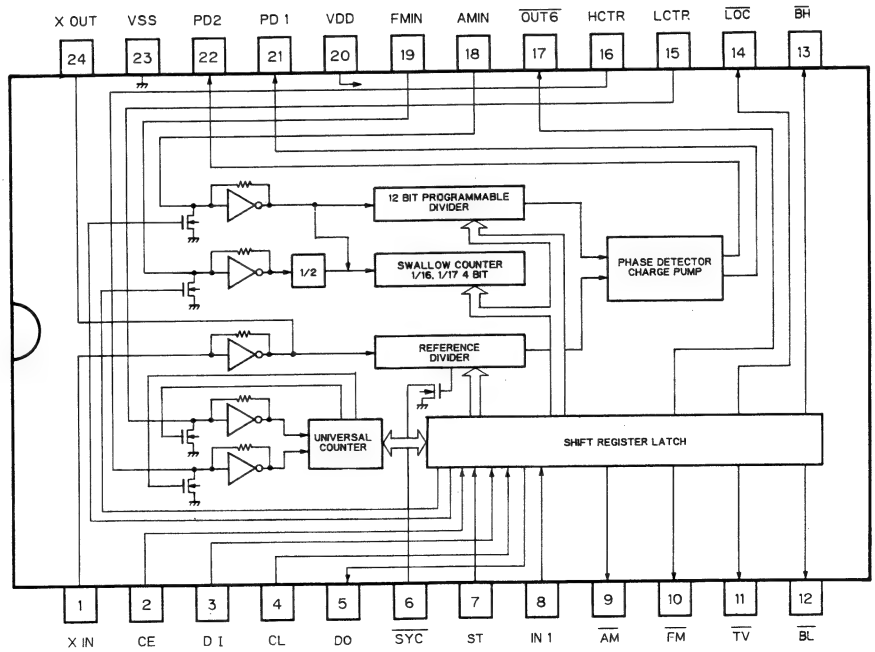
IC703 : TA8214K



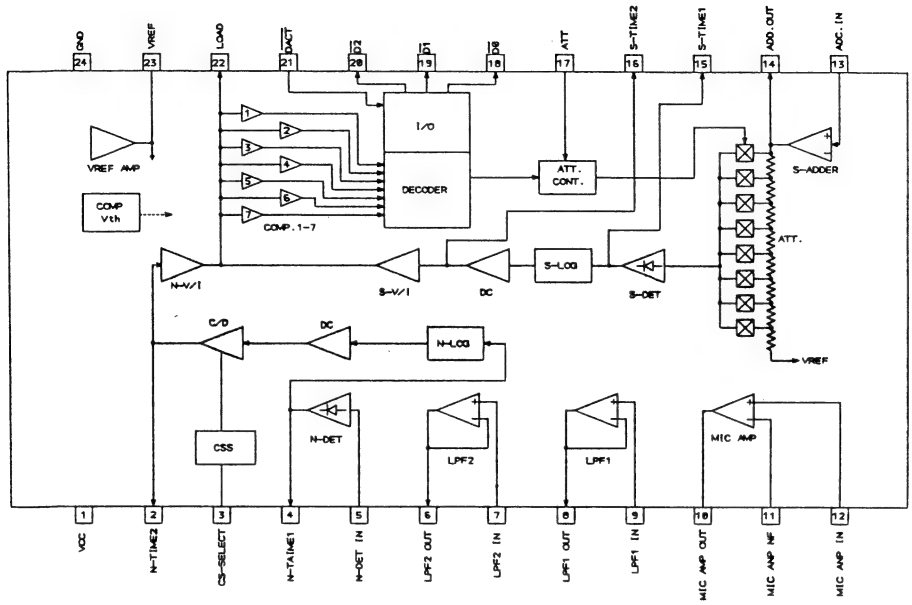
IC451 : KHA159A



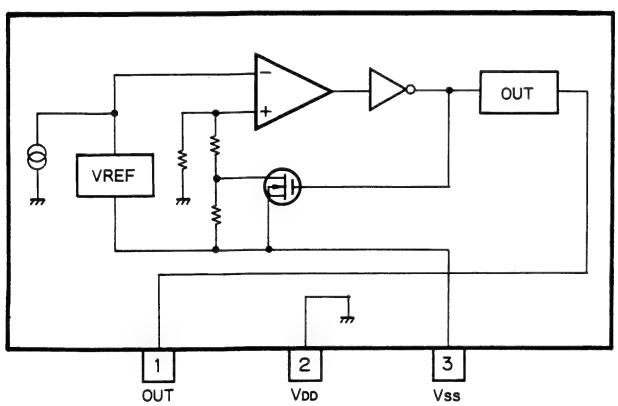
IC503 : LC7218



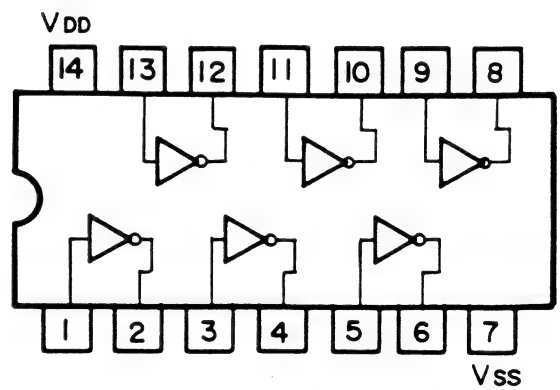
IC551 : PM2002



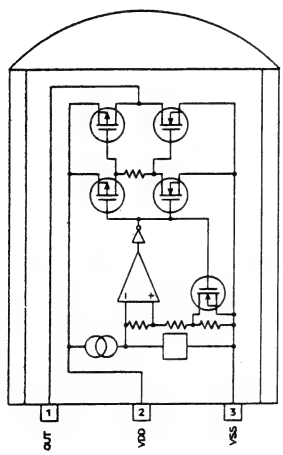
IC702 : S-8053ANO



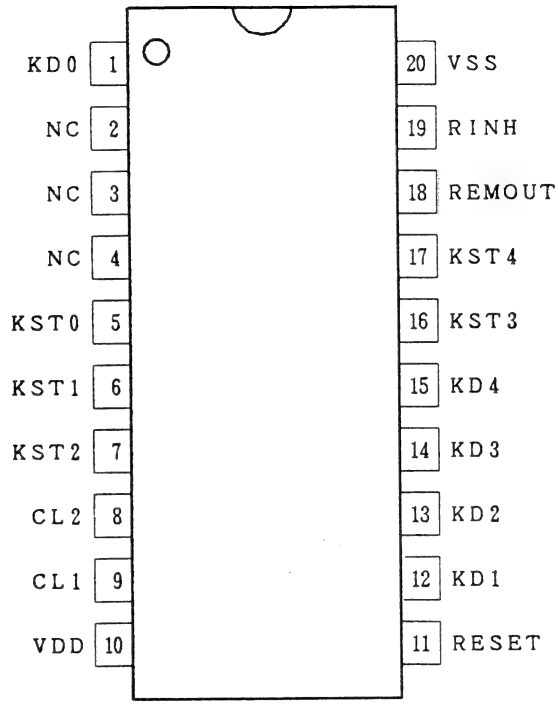
IC504 : TC4069UBP



IC901 : S-80740AH



IC904 : PD4189

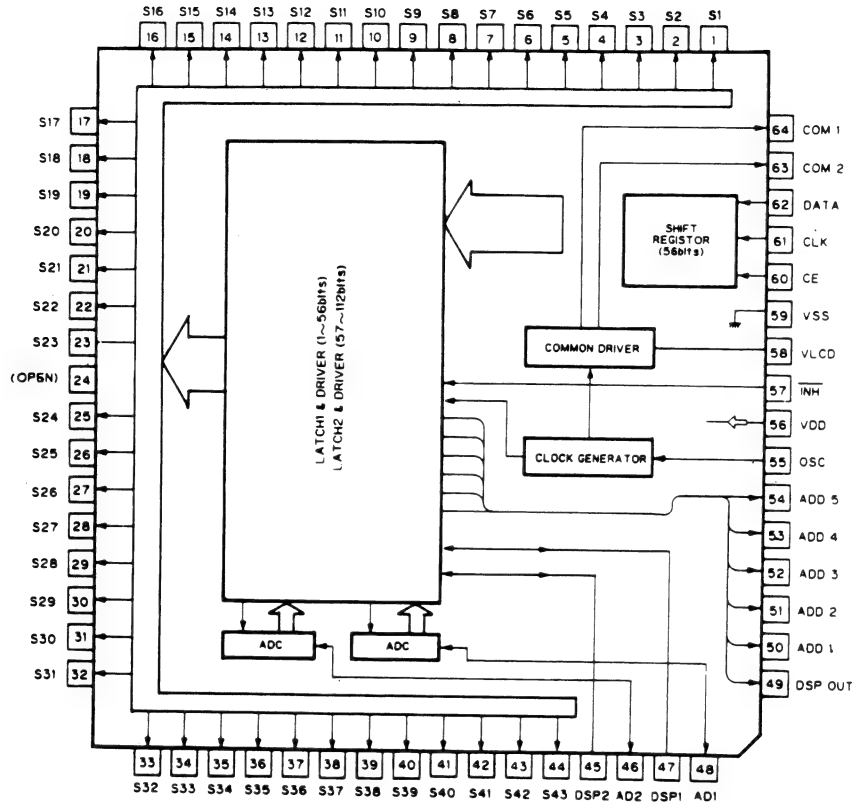


• Pin Functions (PD4189)

Pin No.	Pin Name	I/O	Output Format	Function and Operation
1	KDD	INPUT		Key return input
2 — 4	NC			
5 — 7	KST0 — KST2	OUTPUT	NM	Key strobe output
8	CL2			System clock generator connector pin
9	CL1			System clock generator connector pin
10	VDD			
11	RESET	INPUT		Reset input
12 — 15	KD1 — KD4	INPUT		Key return input
16, 17	KST3, KST4	OUTPUT	NM	Key strobe output
18	REMOUT	OUTPUT	NM	Remote controller data output
19	RINH	OUTPUT	NM	Remote controller OFF output when key data is outputed
20	VSS			GND

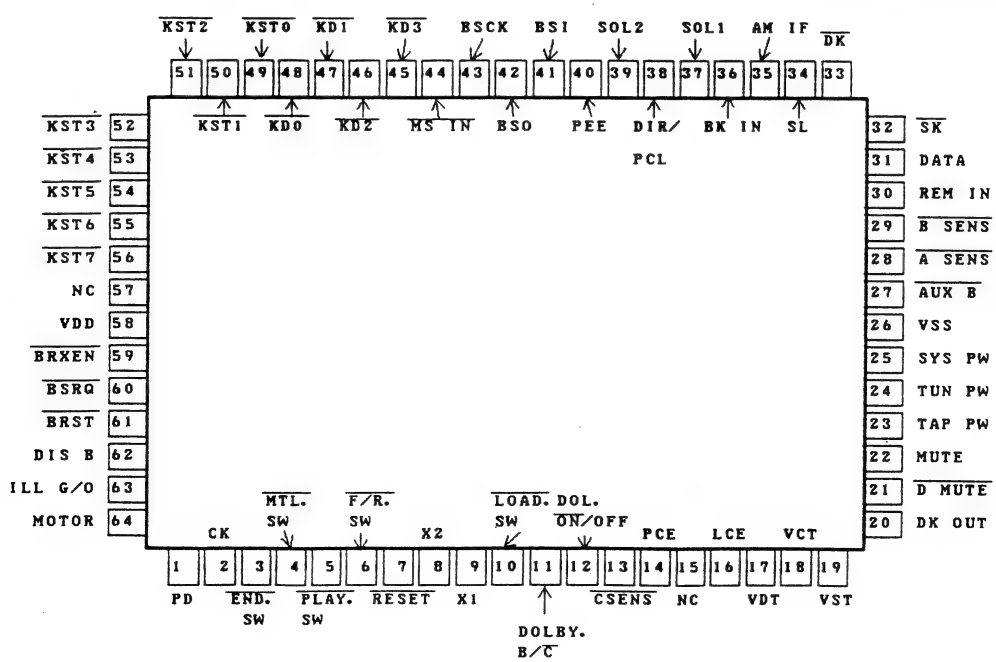
Output Format	Meaning
NM	Neutral resistivity N channel open drain

IC903 : LC7582P



IC701 : *PD4188

*IC's marked by *are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.



• Pin Functions (PD4188)

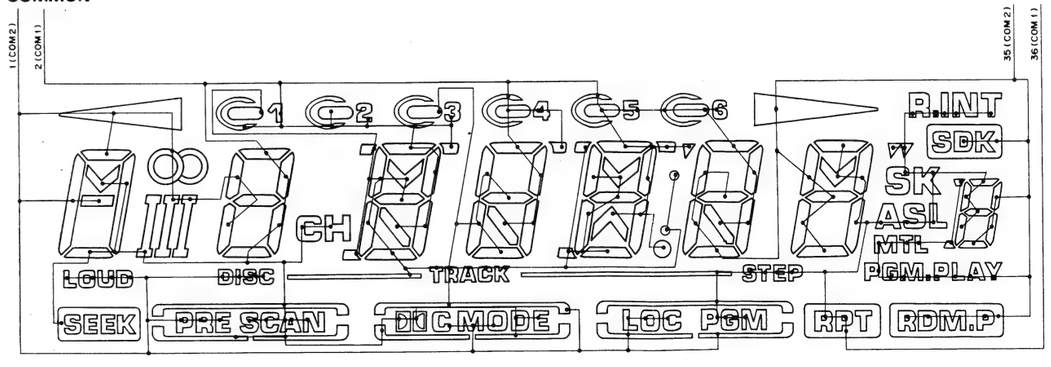
Pin No.	Pin Name	I/O	Output Format	Function and Operation
1	PD	Output	C	LCD driver IC and PLL IC data line
2	CK	Output	C	LCD driver IC and PLL IC clock line
3	$\overline{\text{END. SW}}$	Input		Deck END sensor input
4	$\overline{\text{MTL. SW}}$	Input		Deck METAL (70 μ S) sensor input
5	$\overline{\text{PLAY. SW}}$	Input		Deck head position (PLAY) sensor input
6	$\overline{\text{F/R. SW}}$	Input		Deck FWD/REV sensor input
7	$\overline{\text{RESET}}$	Input		Reset input
8	X2			Crystal oscillating element connection pin
9	X1			Crystal oscillating element connection pin
10	$\overline{\text{LOAD. SW}}$	Input		Deck LOAD/EJECT sensor input
11	DOLBY. B/$\overline{\text{C}}$	Output	C	Dolby NR B/C selector output
12	DOL. $\overline{\text{ON}}$/OFF	Output	C	Dolby NR ON/OFF selector output
13	$\overline{\text{CSENSE}}$	Input		Front panel OPEN/CLOSE sensor input
14	PCE	Output	C	Chip enable output for PLL IC (IC503:LC7218)
15	NC			Not used
16	LCE	Output	C	Chip enable output for LCD driver IC
17	VDT	Output	C	Data output for electronic volume IC (IC451:KHA159A)
18	VCK	Output	C	Clock output for electronic volume IC (IC451:KHA159A)
19	VST	Output	C	Strobe output for electronic volume IC (IC451:KHA159A)
20	DK OUT	Output	C	Tuner mute output
21	$\overline{\text{D MUTE}}$	Output	C	Deck mute output
22	MUTE	Output	C	System mute output
23	TAP PW	Output	C	Not used
24	TUN PW	Output	C	Tuner power supply control
25	SYS PW	Output	C	System (power amp) power supply control
26	VSS			GND
27	$\overline{\text{AUXB}}$	Input		AUX B sensor input
28	$\overline{\text{ASENSE}}$	Input		ACC power supply sensor input
29	$\overline{\text{BSENS}}$	Input		BACK UP power supply sensor input
30	REMIN	Input		Remote control pulse input
31	DATA	Input		Data input for PLL IC (IC503:LC7218)
32	$\overline{\text{SK}}$	Input		SK signal input
33	$\overline{\text{DK}}$	Input		DK signal input
34	SL	Input		Input level sensor input
35	AM IF	Input		AM IF count input
36	BK IN	Input		BK signal input
37	SOL1	Output	C	Output for deck solenoid 1 (head position)
38	DIR/PCL	Output	C	Deck FWD/REV head selector output
39	SOL2	Output	C	Output for deck solenoid 2 (DIR selector and EJECT)
40	PEE	Output	C	Beep tone output

Pin No.	Pin Name	I/O	Output Format	Function and Operation
41	BS I	Input		Bus serial data input
42	BS O	Output	C	Bus serial data output
43	BSCK	Input/ Output	C	Bus serial clock input/output
44	$\overline{\text{MS IN}}$	Input		Music signal input
45～48	$\overline{\text{KD3}}$～$\overline{\text{KD0}}$	Input		Key return input
49	$\overline{\text{KST0}}$	Output	NM	Model sense strobe output
50	$\overline{\text{KST1}}$	Output	NM	Model sense strobe output
51	$\overline{\text{KST2}}$	Output	NM	ASL strobe output
52	$\overline{\text{KST3}}$	Output	NM	Key strobe output
53	$\overline{\text{KST4}}$	Output	NM	ASL mode selector output 1
54	$\overline{\text{KST5}}$	Output	NM	ASL mode selector output 2
55	$\overline{\text{KST6}}$	Output	NM	Detaching and replaceing front panel control
56	$\overline{\text{KST7}}$	Output	NM	Strobe output for front panel open solenoid control
57	NC			
58	VDD			
59	$\overline{\text{BRXEN}}$	Input/ Output	C	Bus reception enable line
60	$\overline{\text{BSRQ}}$	Input		Data communications serial poll request
61	$\overline{\text{BRST}}$	Output	C	Bus reset
62	DIS B	Output	C	AUX control output
63	ILL G/O	Output	C	Illumination green/amber selector output
64	MOTOR	Output	C	Deck main motor control output

Output Format	Meaning
C	CMOS Output
NM	Neutral resistivity N channel open drain

• LCD (CAW1042)

COMMON

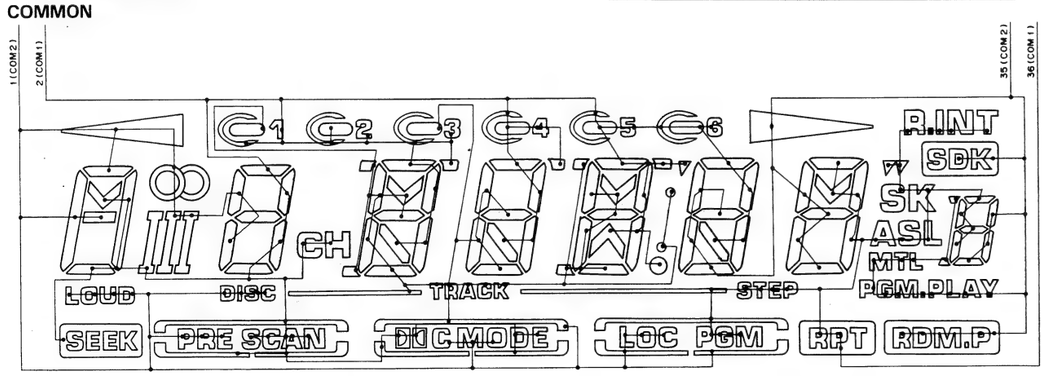


Pin No.	Pin Name	I/O	Output Format	Function and Operation
41	BS I	Input		Bus serial data input
42	BS O	Output	C	Bus serial data output
43	BSCK	Input/ Output	C	Bus serial clock input/output
44	$\overline{\text{MS IN}}$	Input		Music signal input
45～48	$\overline{\text{KD3}}$～$\overline{\text{KD0}}$	Input		Key return input
49	$\overline{\text{KST0}}$	Output	NM	Model sense strobe output
50	$\overline{\text{KST1}}$	Output	NM	Model sense strobe output
51	$\overline{\text{KST2}}$	Output	NM	ASL strobe output
52	$\overline{\text{KST3}}$	Output	NM	Key strobe output
53	$\overline{\text{KST4}}$	Output	NM	ASL mode selector output 1
54	$\overline{\text{KST5}}$	Output	NM	ASL mode selector output 2
55	$\overline{\text{KST6}}$	Output	NM	Detaching and replaceing front panel control
56	$\overline{\text{KST7}}$	Output	NM	Strobe output for front panel open solenoid control
57	NC			
58	VDD			
59	$\overline{\text{BRXEN}}$	Input/ Output	C	Bus reception enable line
60	$\overline{\text{BSRQ}}$	Input		Data communications serial poll request
61	$\overline{\text{BRST}}$	Output	C	Bus reset
62	DIS B	Output	C	AUX control output
63	ILL G/O	Output	C	Illumination green/amber selector output
64	MOTOR	Output	C	Deck main motor control output

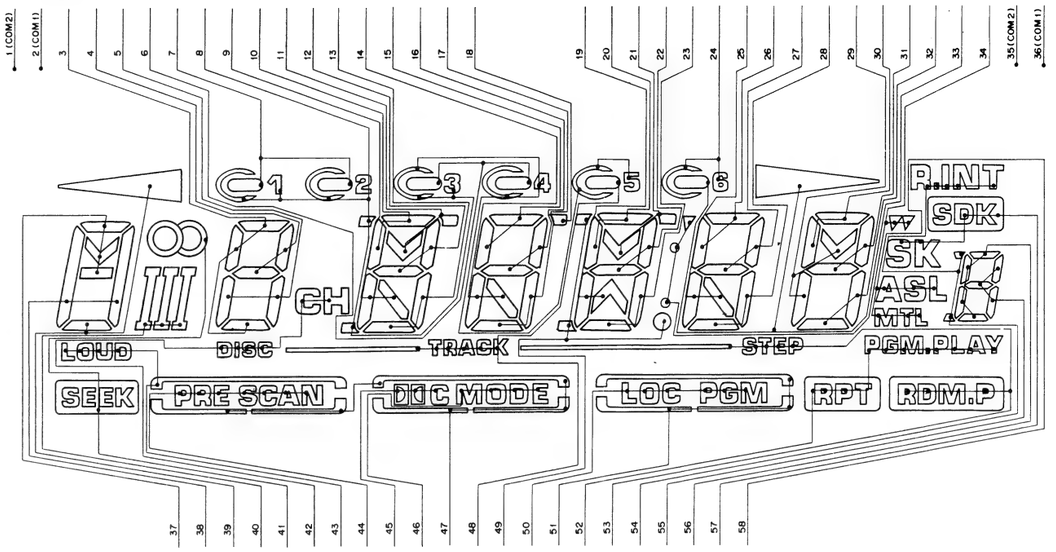
Output Format	Meaning
C	CMOS Output
NM	Neutral resistivity N channel open drain

• LCD (CAW1042)

COMMON

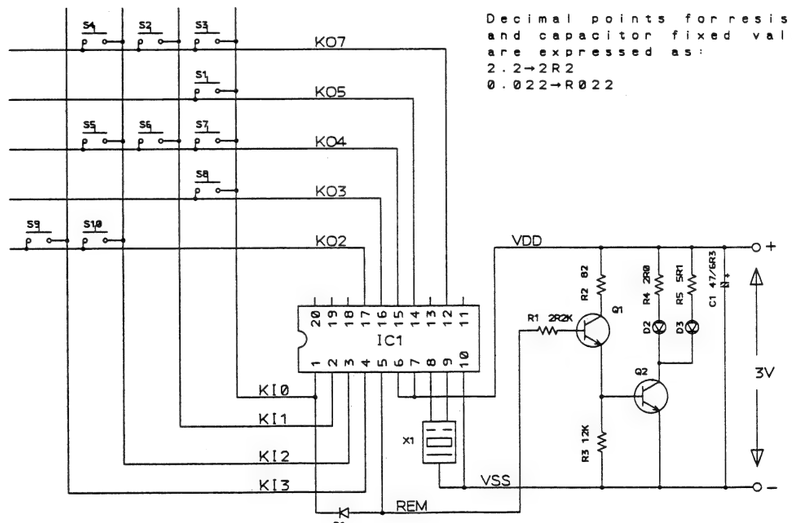


SEGMENT



• Remote Control Assy

S1:BSM
S2:TAPE
S3:TUNER
S4:CD
S5:BAND
S6:− SOURCE
S7:+ SOURCE
S8:ATT
S9:− VOLUME
S10:+ VOLUME



10. SCHEMATIC CIRCUIT DIAGRAM (KEX-M800SDK/WG)

TEST TAPE
315Hz 160nwb/m
–73.3 dBs

MECHANISM CONTROL UNIT

MOTHER P.C. BOARD

AMP P.C. BOARD

EQ. AMP
IC1 : BA3430FS

MTL SWITCH

DOLBY NR
IC301 : HA12088ANT

DOLBY NR ON/OFF

B/C SWITCH

ELECTRONIC VOL.
IC451: KHA150A

ASL CONTROLLER

SYSTEM CONTROL
IC701 : PD4188

PLL
IC503 : LC7218

LOOP FILTER

AM IF BUFFER & SEEK INVERTER
IC501 : KHA142
IC504 : TC4069UBP

LCD DRIVER
IC903 : LC7582P

REMOTE CONTROL/LED SENSOR

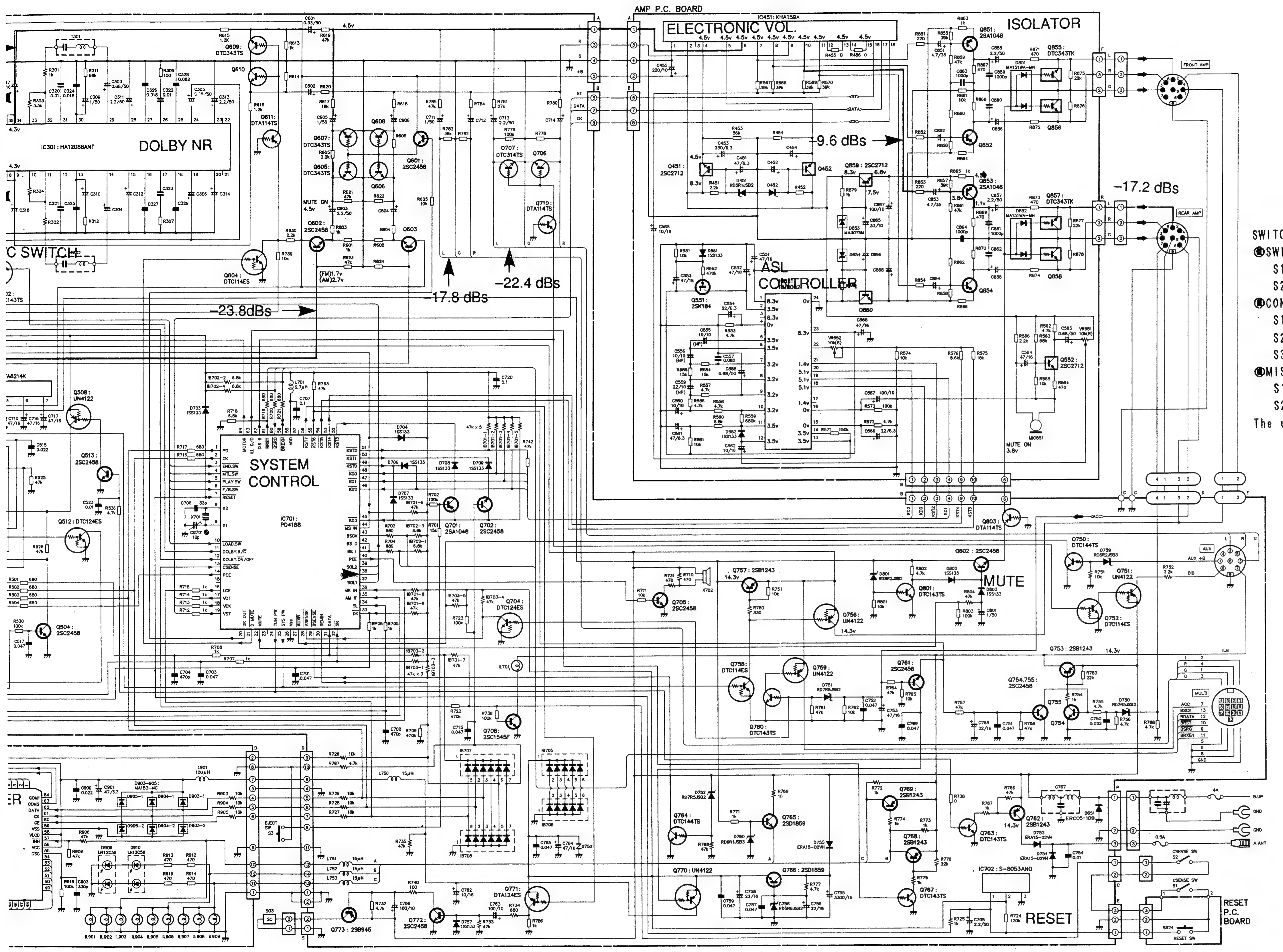
SWITCH P.C. BOARD

CONNECTOR P.C. BOARD

FM/AM TUNER UNIT

DISPLAY P.C. BOARD

–10.7 dBs
–22 dBs
–23.8dBs
–17.8 dBs
–22.4 dBs
–9.6 dBs



NOTE :
- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.

SWITCHES:

● SWITCH P.C. BOARD
- S1: METAL SWITCH··················ON—<u>OFF</u>
- S2: PLAY SWITCH··················ON—<u>OFF</u>

● CONNECTOR P.C. BOARD
- S1: LOAD SWITCH··················ON—<u>OFF</u>
- S2: END SWITCH··················ON—<u>OFF</u>
- S3: F/R SWITCH··················ON—<u>OFF</u>

● MISCELLANEOUS
- S1: CSENSE SWITCH················ON—<u>OFF</u>
- S2: CSENSE SWITCH················ON—<u>OFF</u>

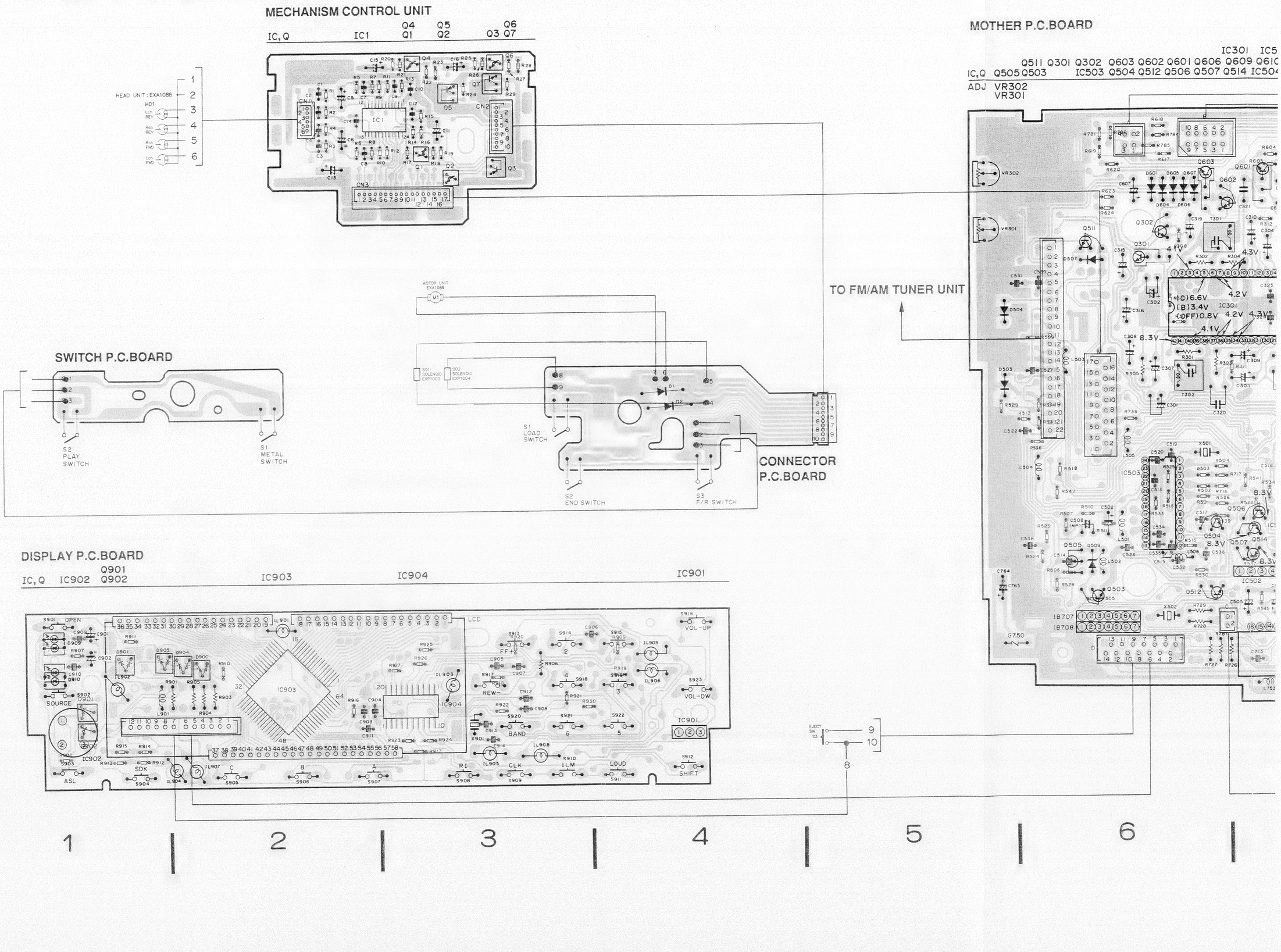
The underlined indicates the switch position.

Audio Tuner Unit
Consists of ● Amp P.C. Board ● Mother P.C. Board

Display Unit
Consists of ● Display P.C. Board ● Reset P.C. Board

Fig. 22

11. CONNECTION DIAGRAM (KEX-M800SDK/WG)



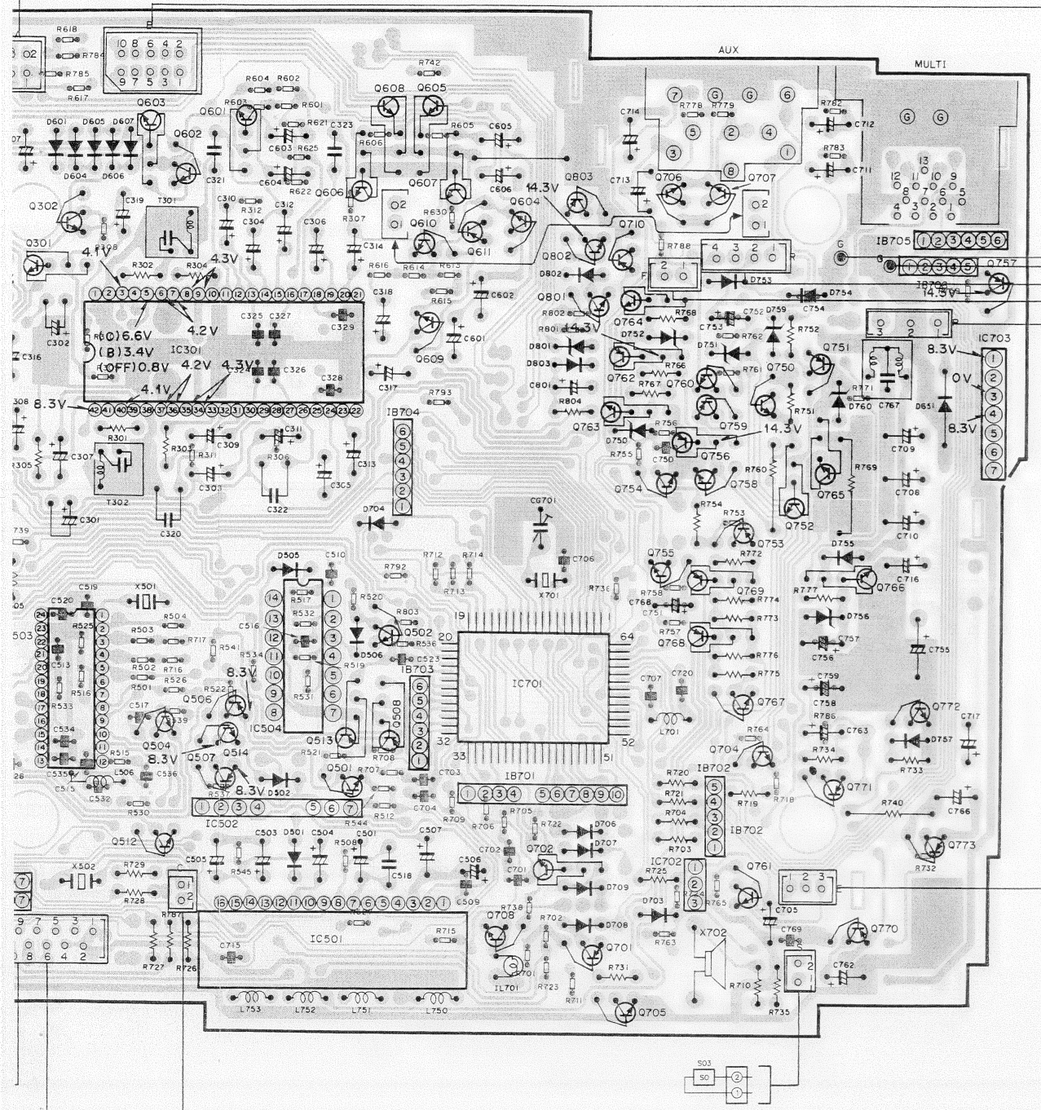
IC702
Q801 Q802 Q803 Q764 Q710 Q706 Q707

IC301 IC502 IC501 IC701 Q762 Q769 Q760 Q759 Q756 Q750 Q751 Q752 Q765 Q757
)3 Q602 Q601 Q606 Q609 Q610 Q611 Q604 Q607 Q608 Q605 Q754 Q758 Q755 Q753 Q769 Q768 Q767 Q766 Q772 IC703
)4 Q512 Q506 Q507 Q514 IC504 Q501 Q513 Q508 Q502 Q708 Q702 Q701 Q705 Q761 Q770 Q704 Q771 Q773

CG701

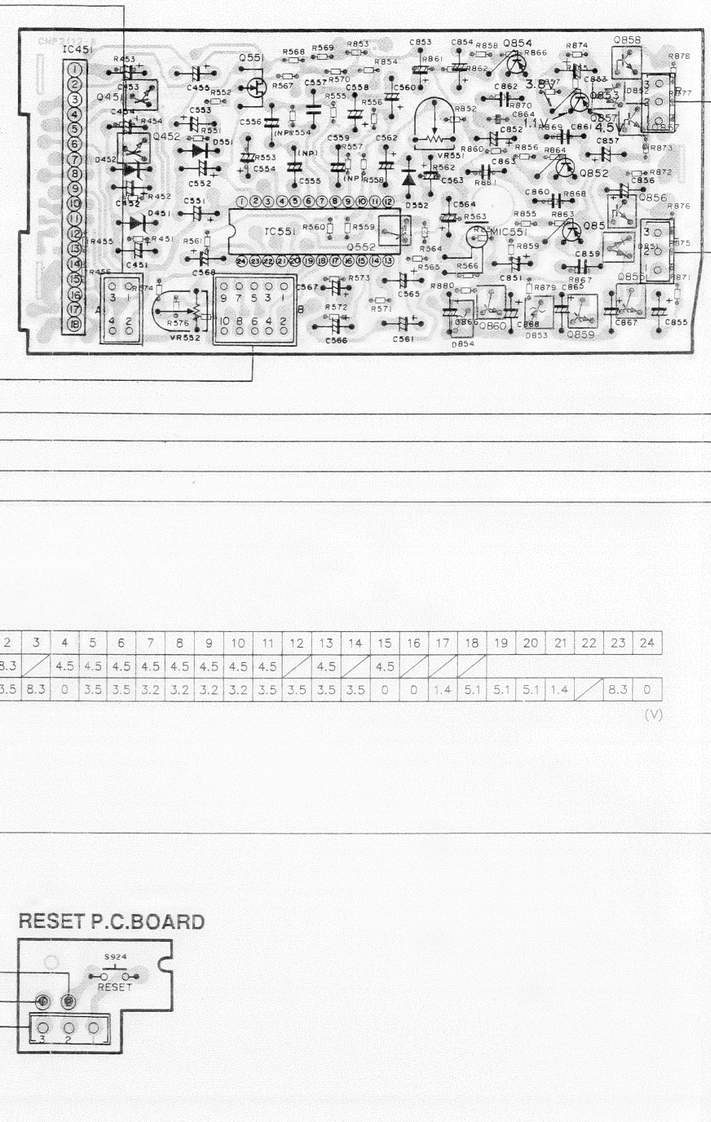
AMP P.C.BOARD

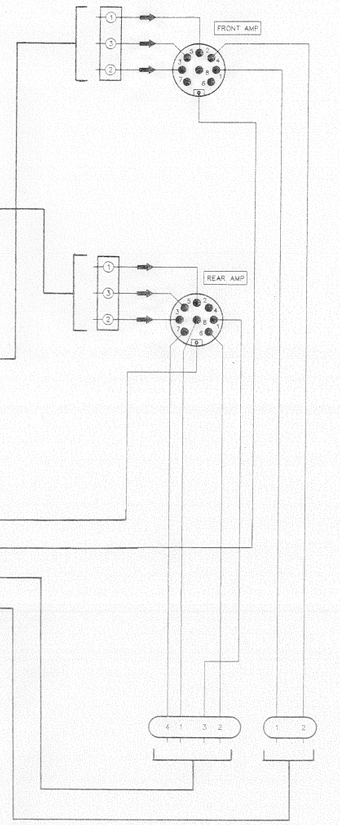
Q451 Q452 Q552 Q860 Q859 Q855 Q856 Q857 Q858
IC, Q IC451 Q551 IC551 Q854 Q852 Q851 Q853

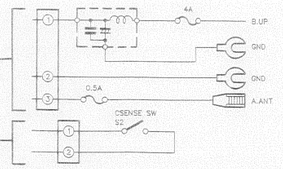


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC451	0	8.3	/	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	/	4.5	/	4.5	/	/	/						
IC551	8.3	3.5	8.3	0	3.5	3.5	3.2	3.2	3.2	3.2	3.5	3.5	3.5	3.5	0	0	1.4	5.1	5.1	5.1	1.4	/	8.3	0

(V)







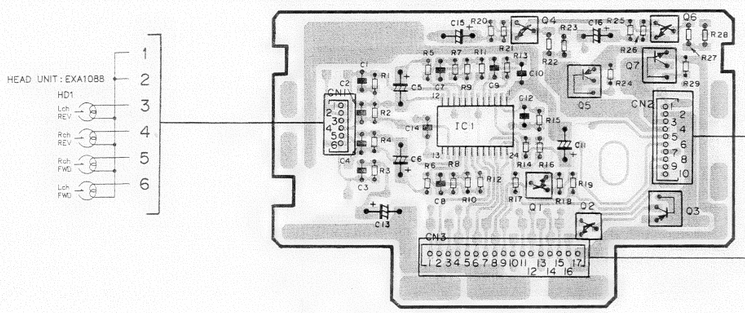
A B C D

Fig. 23

12. CONNECTION DIAGRAM (KEX-M800/EW)

MECHANISM CONTROL UNIT

IC, Q IC1 Q4 Q1 Q5 Q2 Q3 Q7 Q6



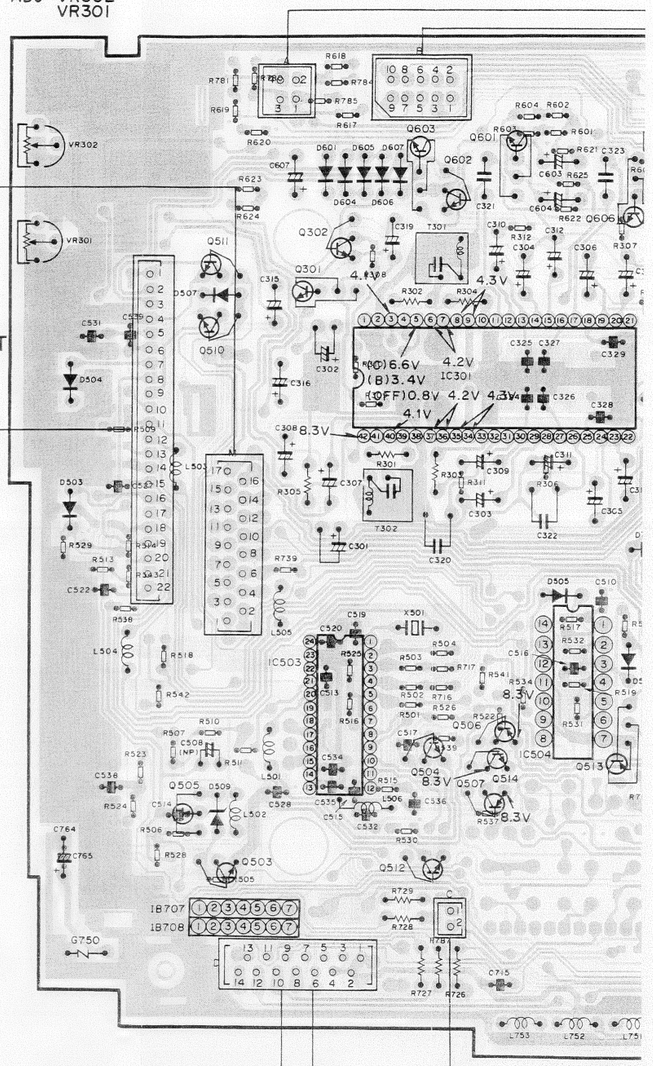
MOTHER P.C.BOARD

IC301

Q510 Q511 Q301 Q302 Q603 Q602 Q601 Q606 Q609 Q610 Q611 Q604

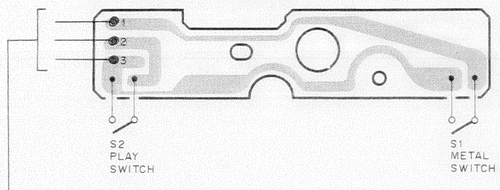
IC, Q Q505 Q503 IC503 Q504 Q512 Q506 Q507 Q514 IC504 Q513

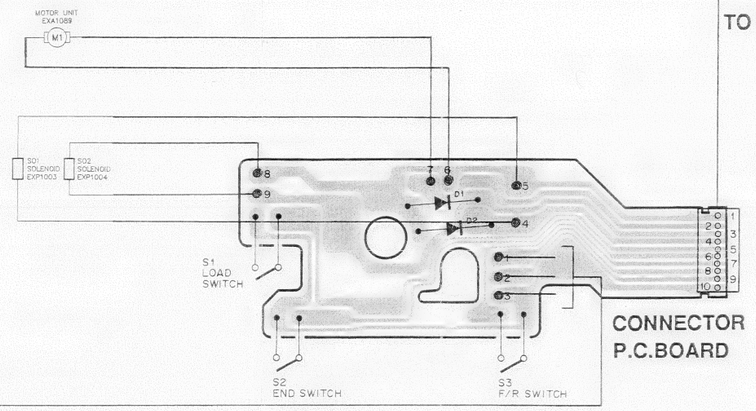
ADJ VR302 VR301



TO FM/AM TUNER UNIT

SWITCH P.C.BOARD



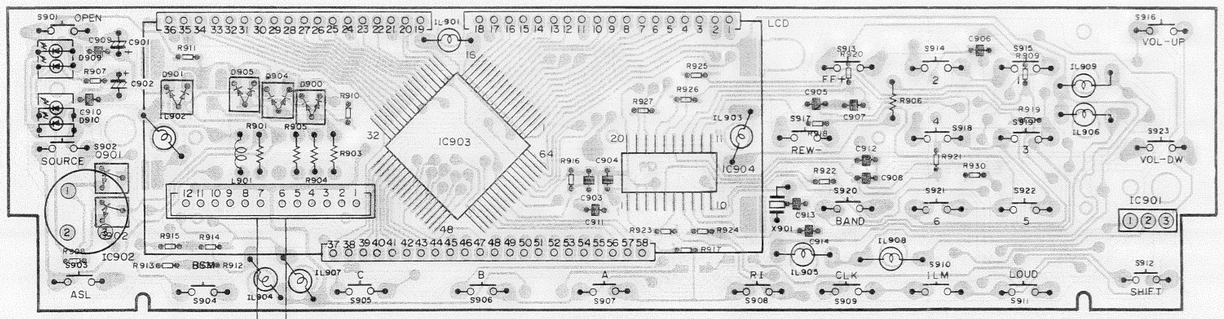


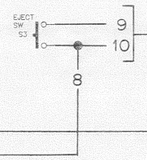
CONNECTOR P.C.BOARD

DISPLAY P.C.BOARD

Q901

IC, Q IC902 Q902 IC903 IC904 IC901





IC702
Q801 Q802 Q803 Q764 Q710 Q706 Q707

IC301
2 Q601 Q606 Q609 Q610 Q611 Q604 Q607 Q608 Q605 Q754 Q758 Q755 Q753 Q769 Q768 Q767 Q766 Q772 IC703
Q506 Q507 Q514 IC504 Q513 Q508 Q502 Q708 Q702 Q701 Q705 Q761 Q770 Q704 Q771 Q773

IC701 Q762 Q769 Q760 Q759 Q756 Q750 Q751 Q752 Q765 Q757

CG701

AMP P.C.BOARD

Q451 Q452 Q552 Q860 Q859 Q855 Q856 Q857 Q858
IC, Q IC451 Q551 IC551 Q854 Q852 Q851 Q853

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC451	0	8.3	/	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	/	4.5	/	4.5	/	/	/						
IC551	8.3	3.5	8.3	0	3.5	3.5	3.2	3.2	3.2	3.2	3.5	3.5	3.5	3.5	0	0	1.4	5.1	5.1	5.1	1.4	/	8.3	0

(V)

FRONT AMP

REAR AMP

4A
B.UP
GND
GND
0.5A
A.ANT

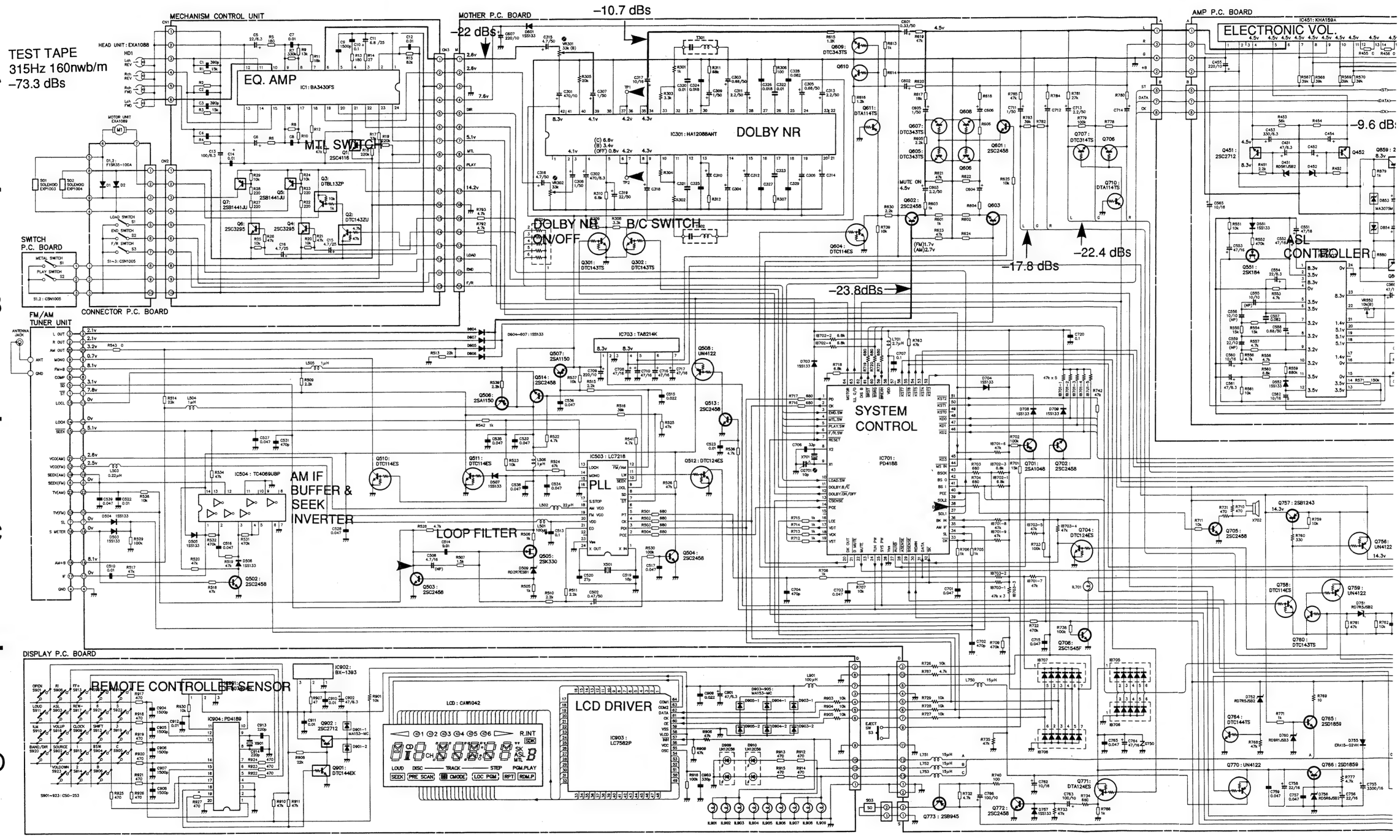
CSENSE SW
S2

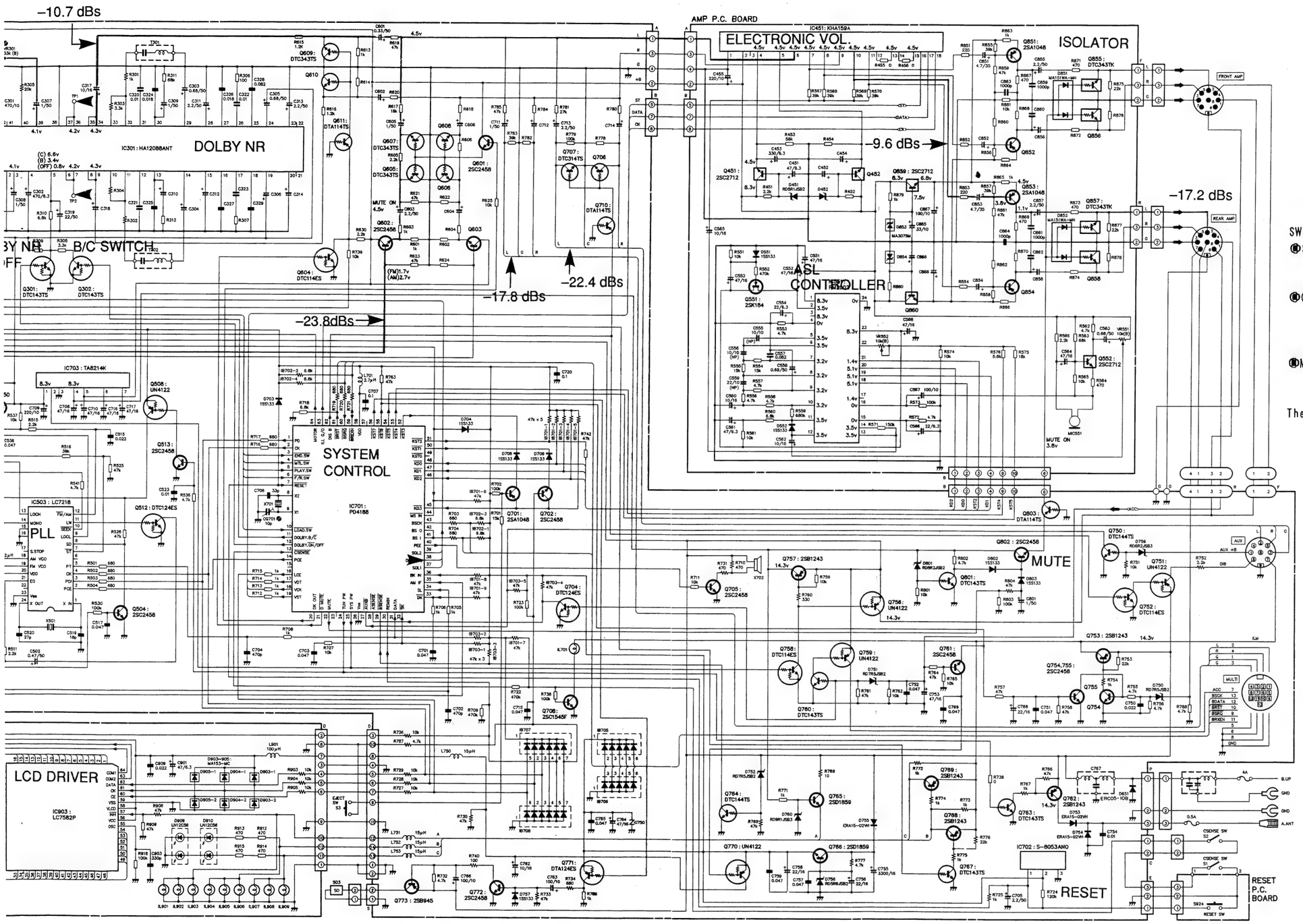
CSENSE SW
S1

RESET P.C.BOARD
S924
RESET

Fig. 24

13. SCHEMATIC CIRCUIT DIAGRAM (KEX-M800/EW)





NOTE :
- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.

SWITCHES:

Ⓡ SWITCH P. C. BOARD
- S1: METAL SWITCH ····· ON — OFF
- S2: PLAY SWITCH ····· ON — OFF

Ⓡ CONNECTOR P. C. BOARD
- S1: LOAD SWITCH ····· ON — OFF
- S2: END SWITCH ····· ON — OFF
- S3: F/R SWITCH ····· ON — OFF

Ⓜ MISCELLANEOUS
- S1: CSENSE SWITCH ····· ON — OFF
- S2: CSENSE SWITCH ····· ON — OFF

The underlined indicates the switch position.

Audio Tuner Unit

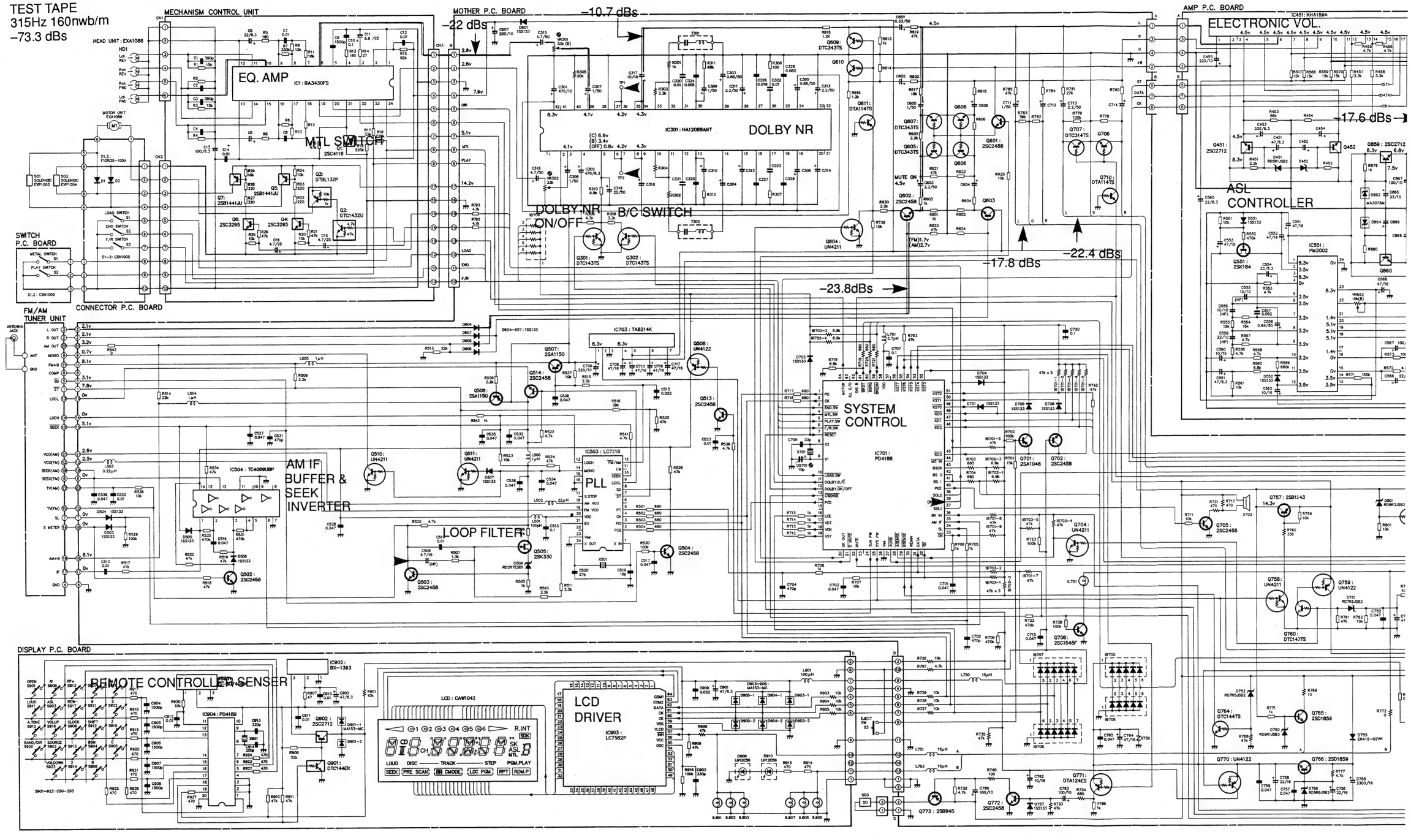
Consists of
- Amp P. C. Board
- Mother P. C. Board

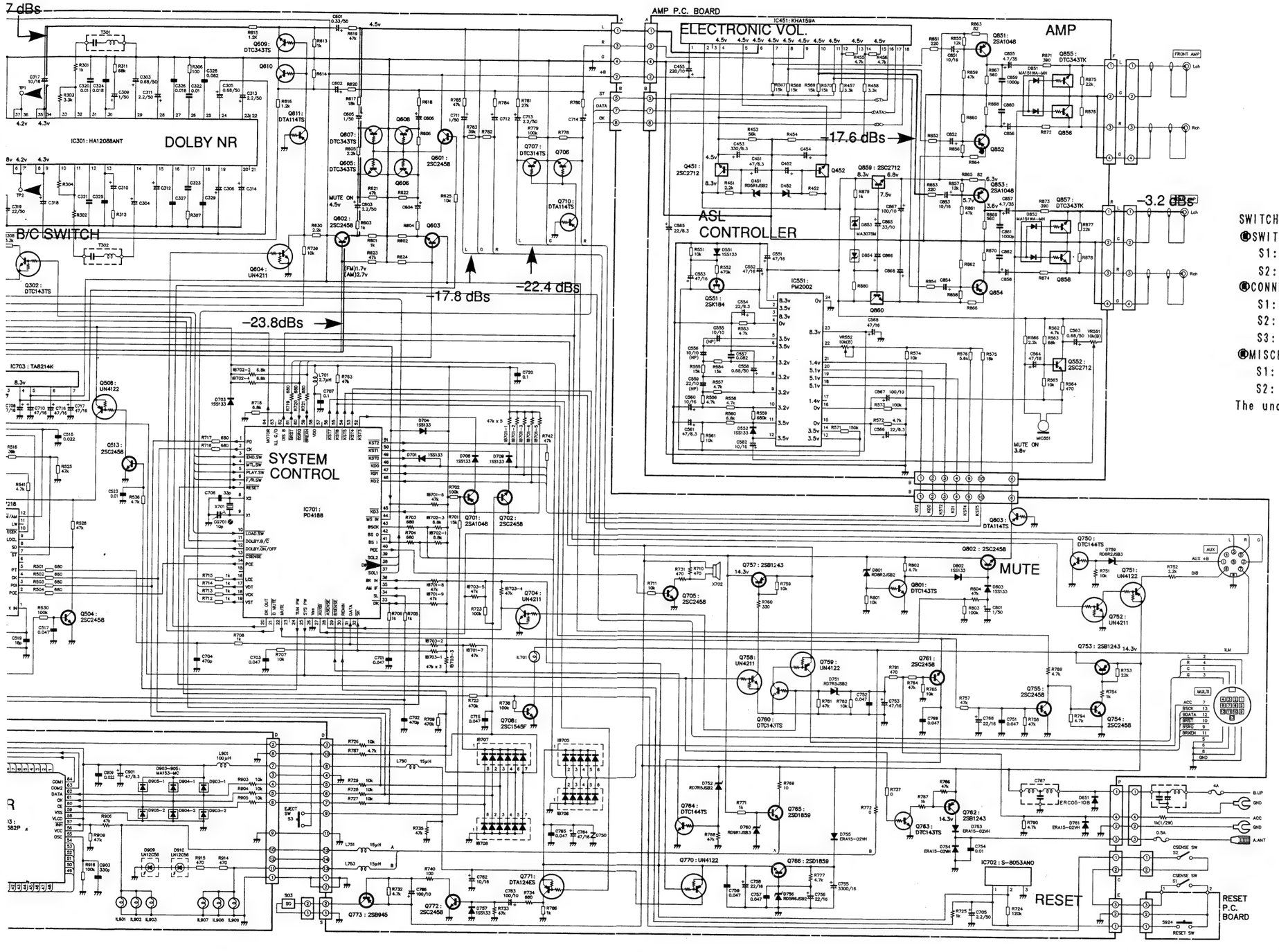
Display Unit

Consists of
- Display P. C. Board
- Reset P. C. Board

Fig. 25

14. SCHEMATIC CIRCUIT DIAGRAM (KEX-M800/ES)





NOTE :

- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.

SWITCHES:

Ⓑ SWITCH P. C. BOARD
- S1: METAL SWITCH ····· ON — OFF
- S2: PLAY SWITCH ····· ON — OFF

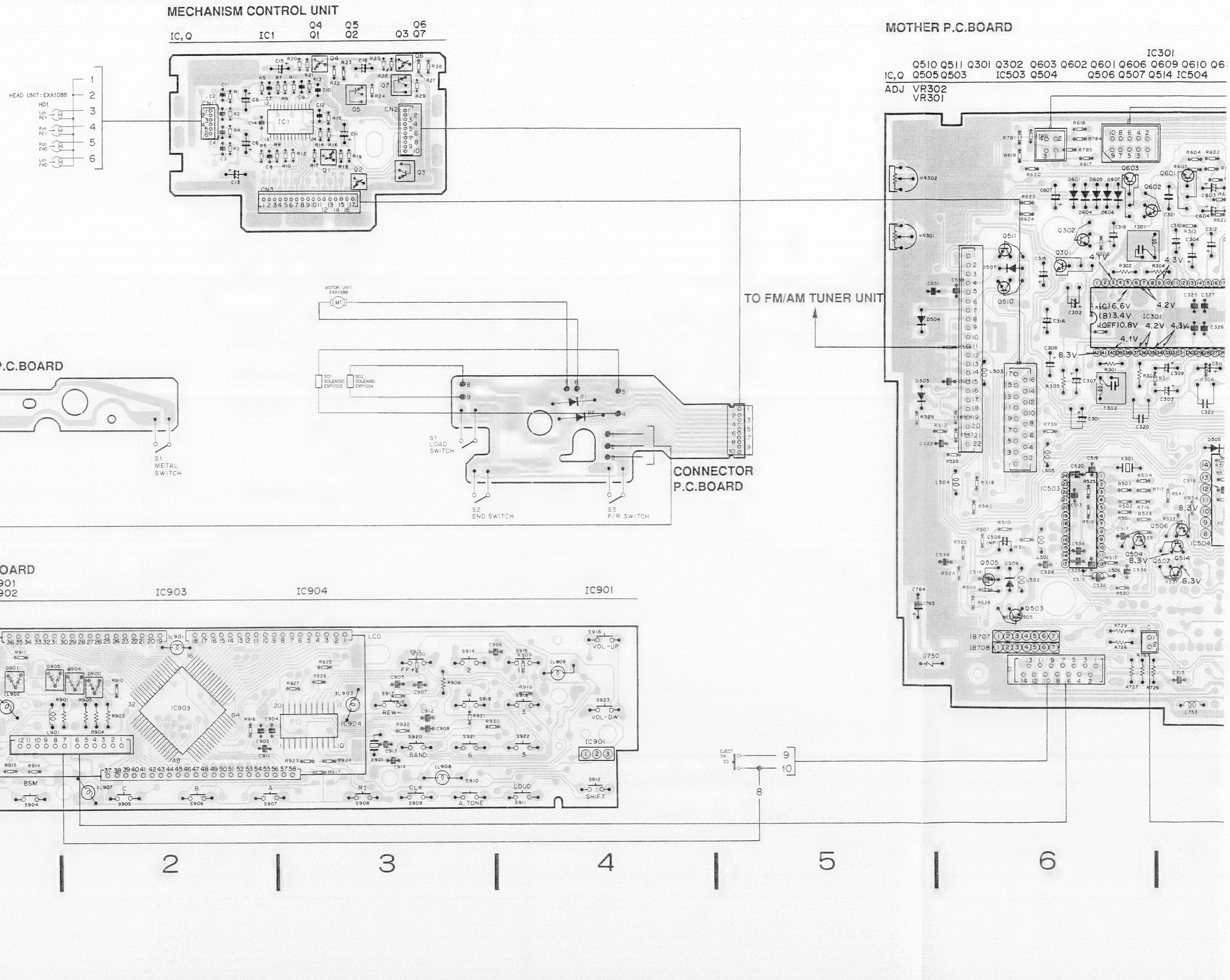
Ⓒ CONNECTOR P. C. BOARD
- S1: LOAD SWITCH ····· ON — OFF
- S2: END SWITCH ····· ON — OFF
- S3: F/R SWITCH ····· ON — OFF

Ⓓ MISCELLANEOUS
- S1: CSENSE SWITCH ····· ON — OFF
- S2: CSENSE SWITCH ····· ON — OFF

The underlined indicates the switch position.

Fig. 26

15. CONNECTION DIAGRAM (KEX-M800/ES)

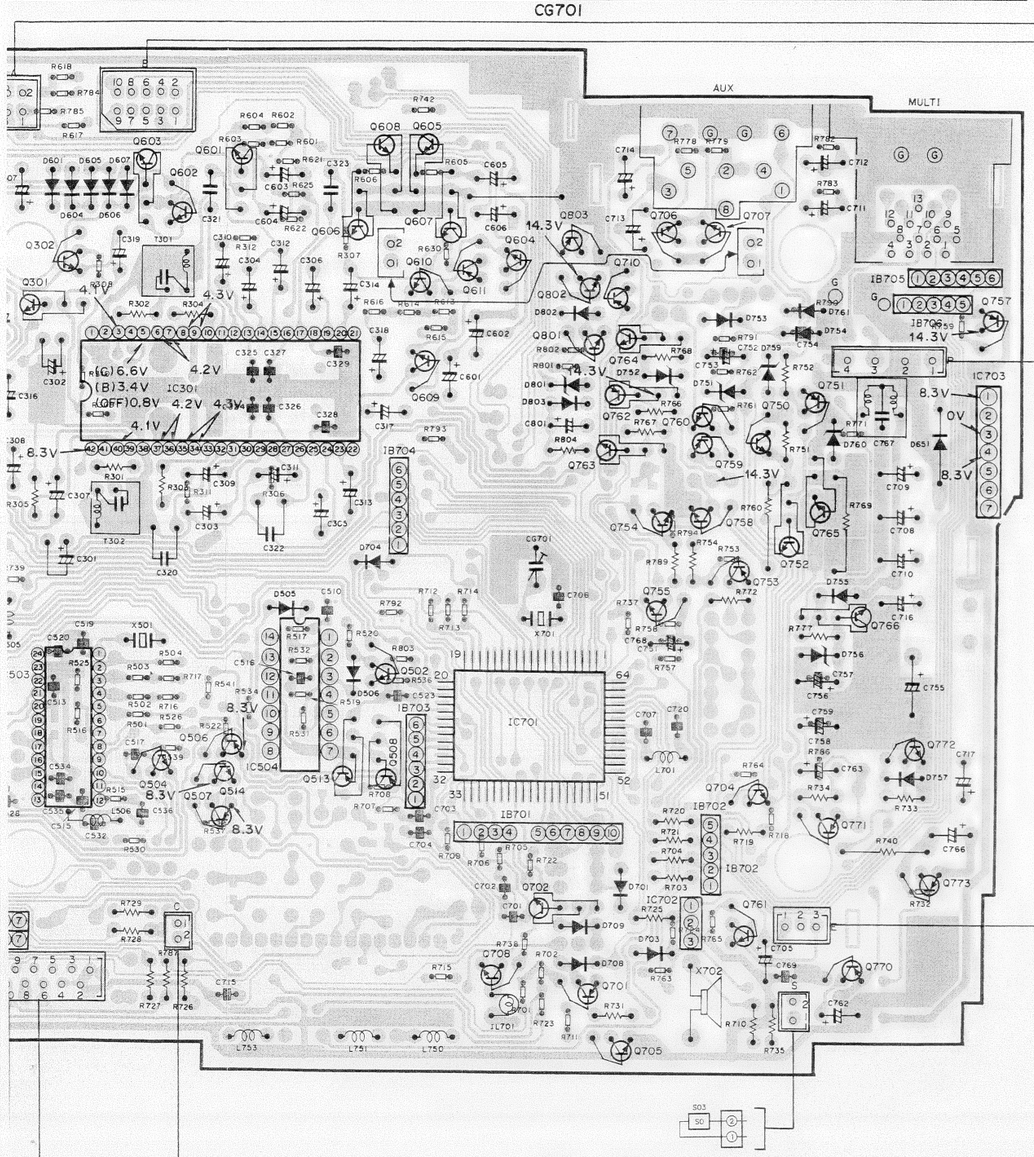


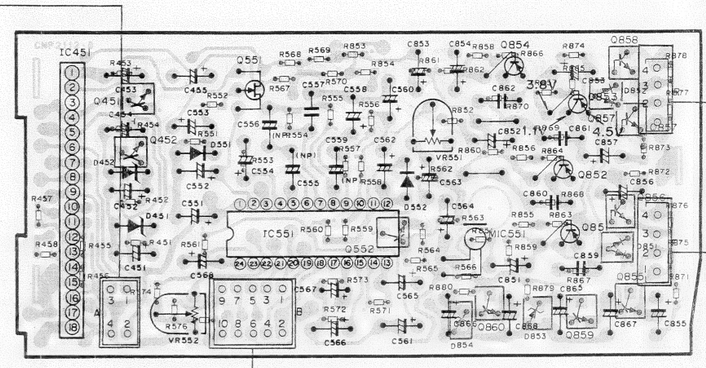
IC702
Q801 Q802 Q803 Q764 Q710 Q706 Q707
IC301 IC701 Q762 Q769 Q760 Q759 Q750 Q751 Q752 Q765 Q757
03 Q602 Q601 Q606 Q609 Q610 Q611 Q604 Q607 Q608 Q605 Q754 Q758 Q755 Q753 Q766 Q772 IC703
04 Q506 Q507 Q514 IC504 Q513 Q508 Q502 Q708 Q702 Q701 Q705 Q761 Q770 Q704 Q771 Q773

CG701

AMP P.C.BOARD

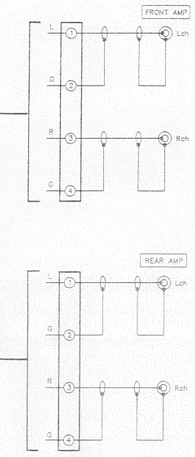
Q451 Q452 Q552 Q860 Q859 Q855 Q856 Q857 Q858
IC, Q IC451 Q551 IC551 Q854 Q852 Q851 Q853

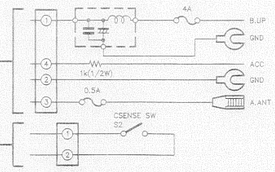




	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC451	0	8.3	/	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	/	4.5	/	4.5	/	/	/						
IC551	8.3	3.5	8.3	0	3.5	3.5	3.2	3.2	3.2	3.2	3.5	3.5	3.5	3.5	0	0	1.4	5.1	5.1	5.1	1.4	/	8.3	0

(V)





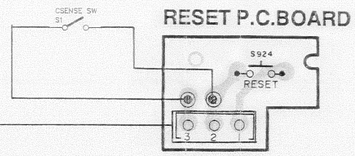
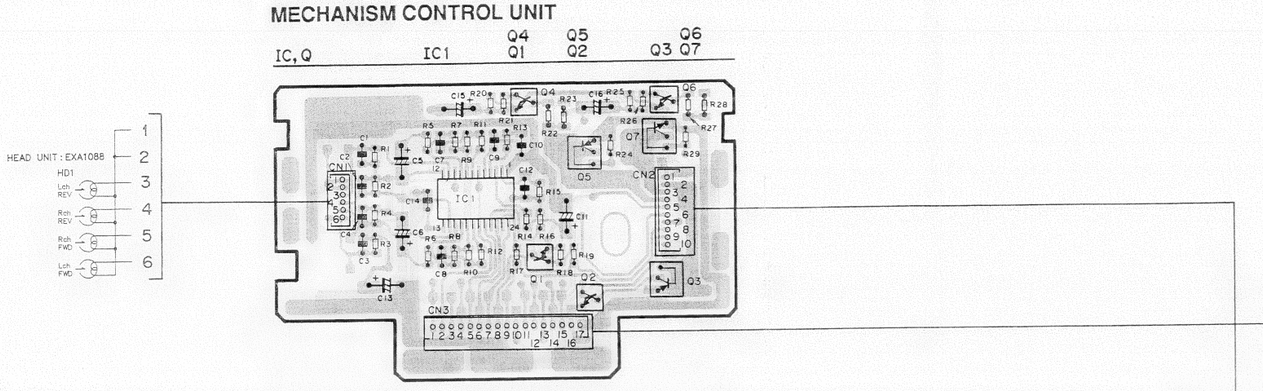


Fig. 27

16. CONNECTION DIAGRAM (KEX-M800/UC)

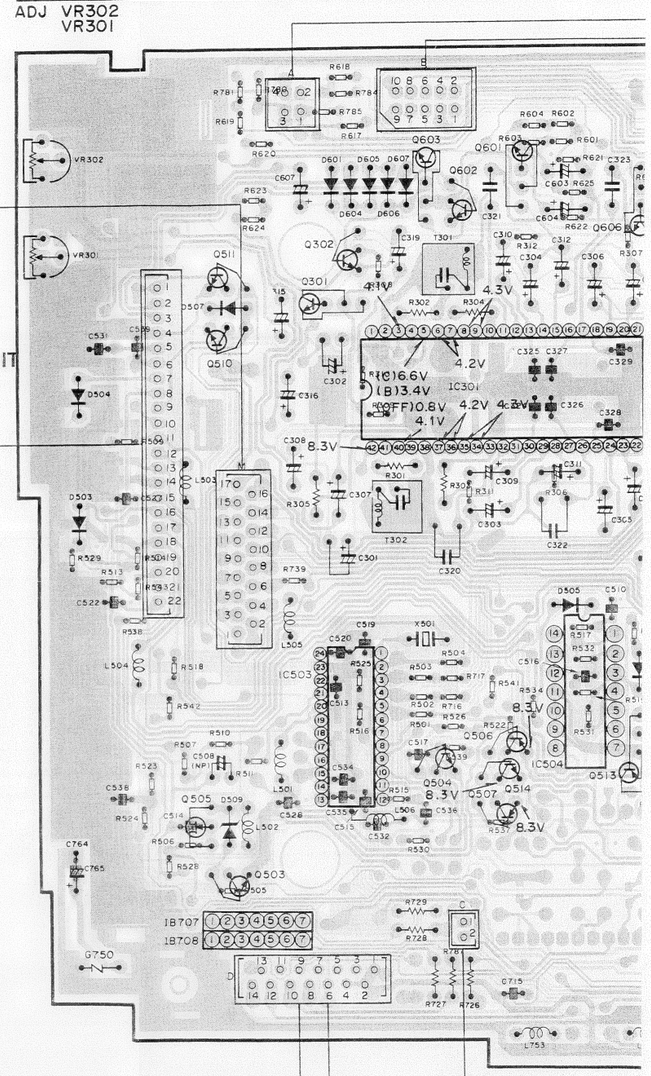
MECHANISM CONTROL UNIT

IC, Q IC1 Q4 Q1 Q5 Q2 Q3 Q6 Q7



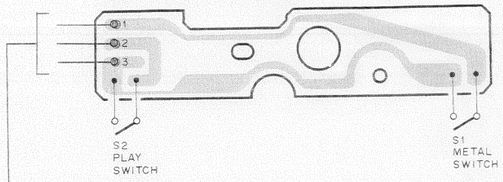
MOTHER P.C.BOARD

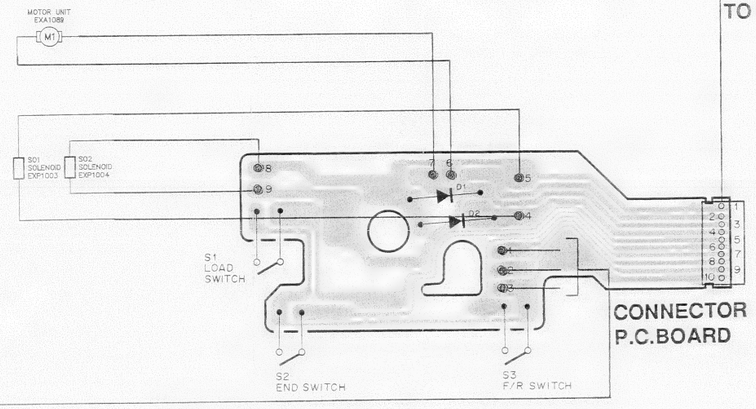
IC301
Q510 Q511 Q301 Q302 Q603 Q602 Q601 Q606 Q609 Q610 Q611 Q604
IC, Q Q505 Q503 IC503 Q504 Q506 Q507 Q514 IC504 Q513
ADJ VR302 VR301



TO FM/AM TUNER UNIT

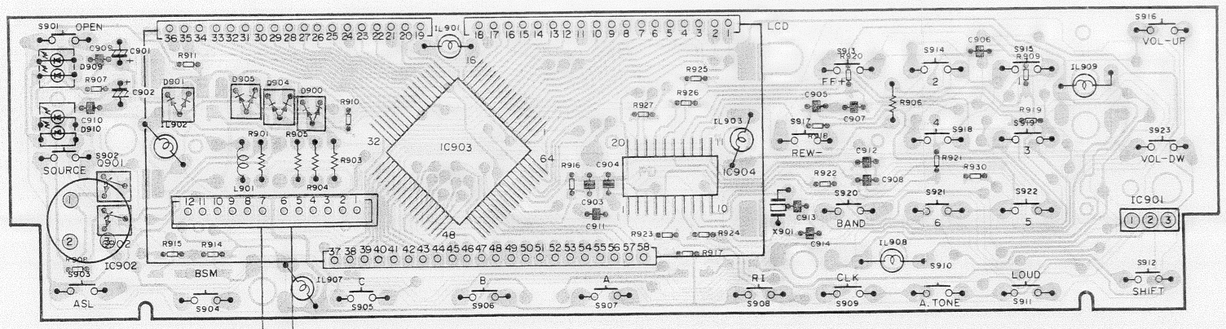
SWITCH P.C.BOARD

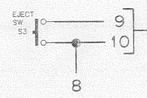




DISPLAY P.C.BOARD

IC, Q IC902 Q901 Q902 IC903 IC904 IC901

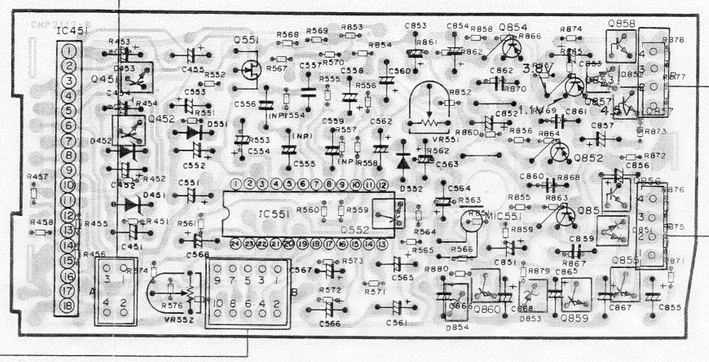


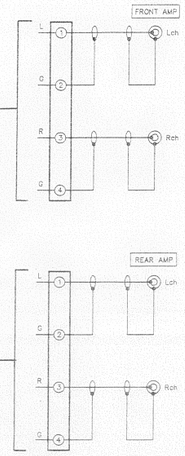


IC702
Q801 Q802 Q803 Q764 Q710 Q706 Q707
IC301 IC701 Q762 Q769 Q760 Q759 Q750 Q751 Q752 Q765 Q757
Q601 Q606 Q609 Q610 Q611 Q604 Q607 Q608 Q605 Q754 Q758 Q755 Q753 Q766 Q772 IC703
Q506 Q507 Q514 IC504 Q513 Q508 Q502 Q708 Q702 Q701 Q705 Q761 Q770 Q704 Q771 Q773
CG701

AMP P.C.BOARD

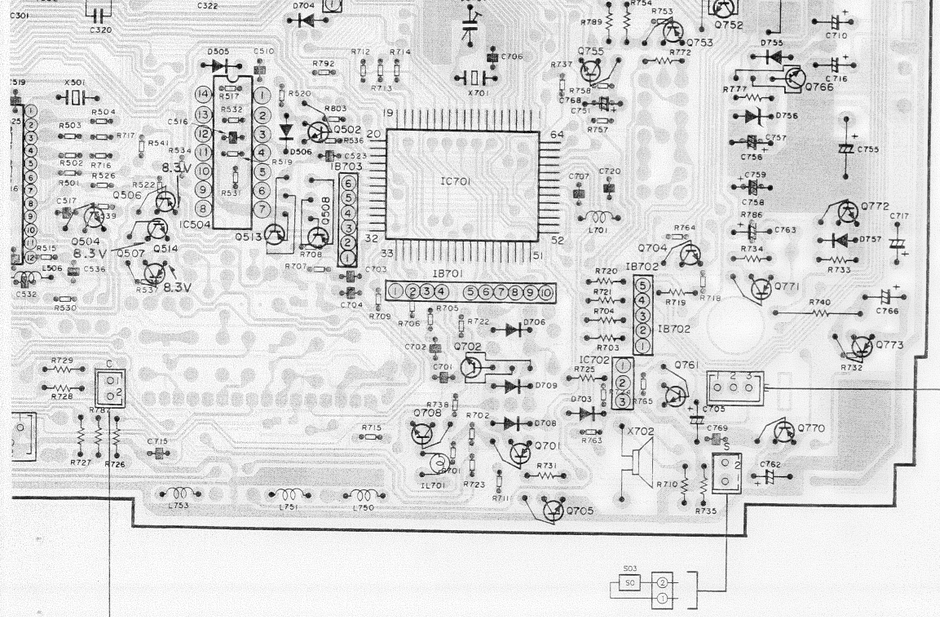
Q451 Q452 Q552 Q860 Q859 Q855 Q856 Q857 Q858
IC, Q IC451 Q551 IC551 Q854 Q852 Q851 Q853

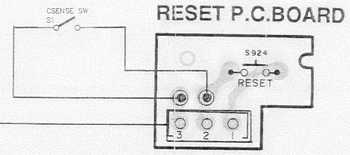


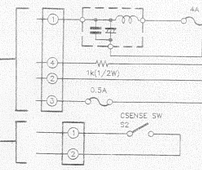


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC451	0	8.3		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5									
IC551	8.3	3.5	8.3	0	3.5	3.5	3.2	3.2	3.2	3.2	3.5	3.5	3.5	3.5	0	0	1.4	5.1	5.1	5.1	1.4		8.3	0

(V)



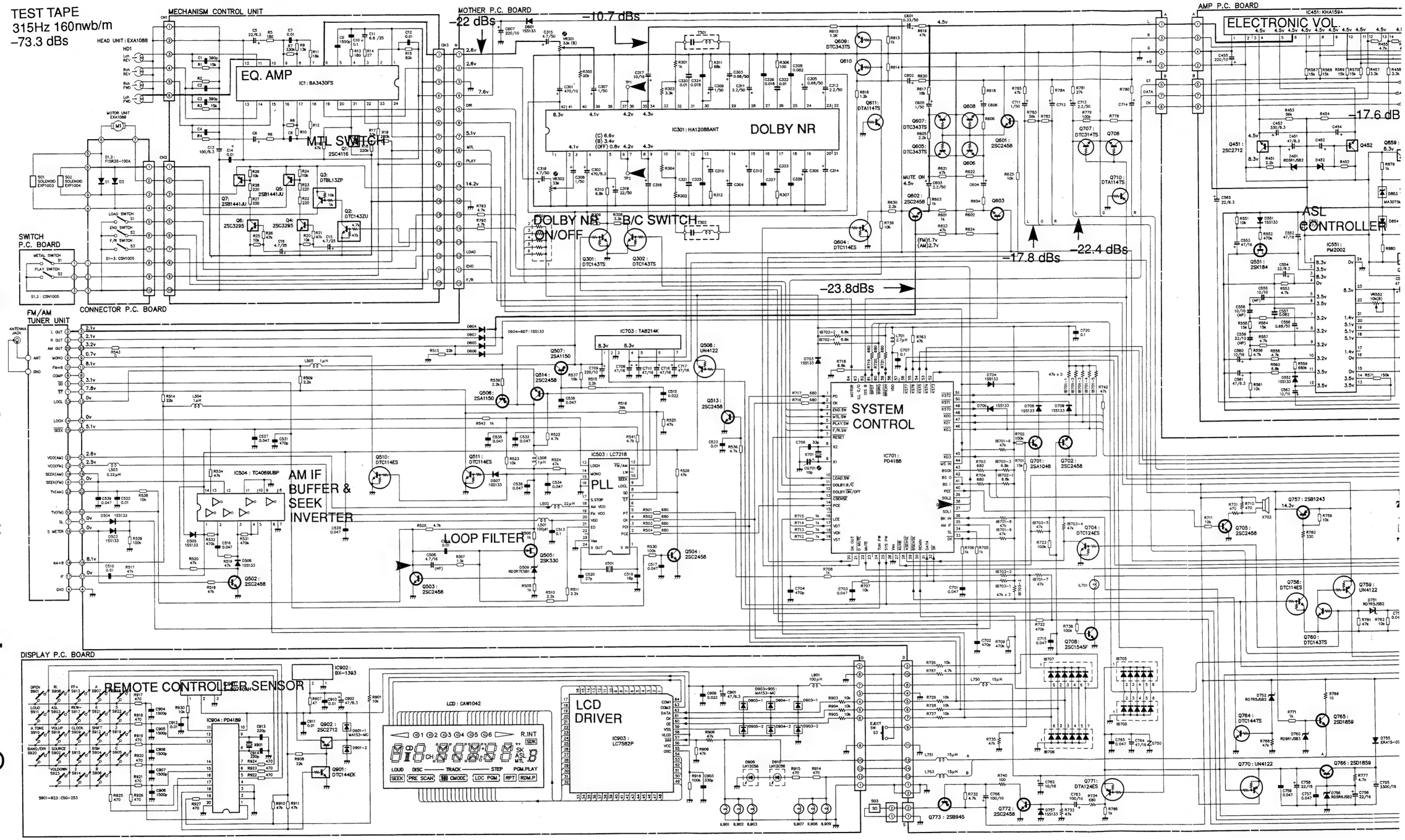


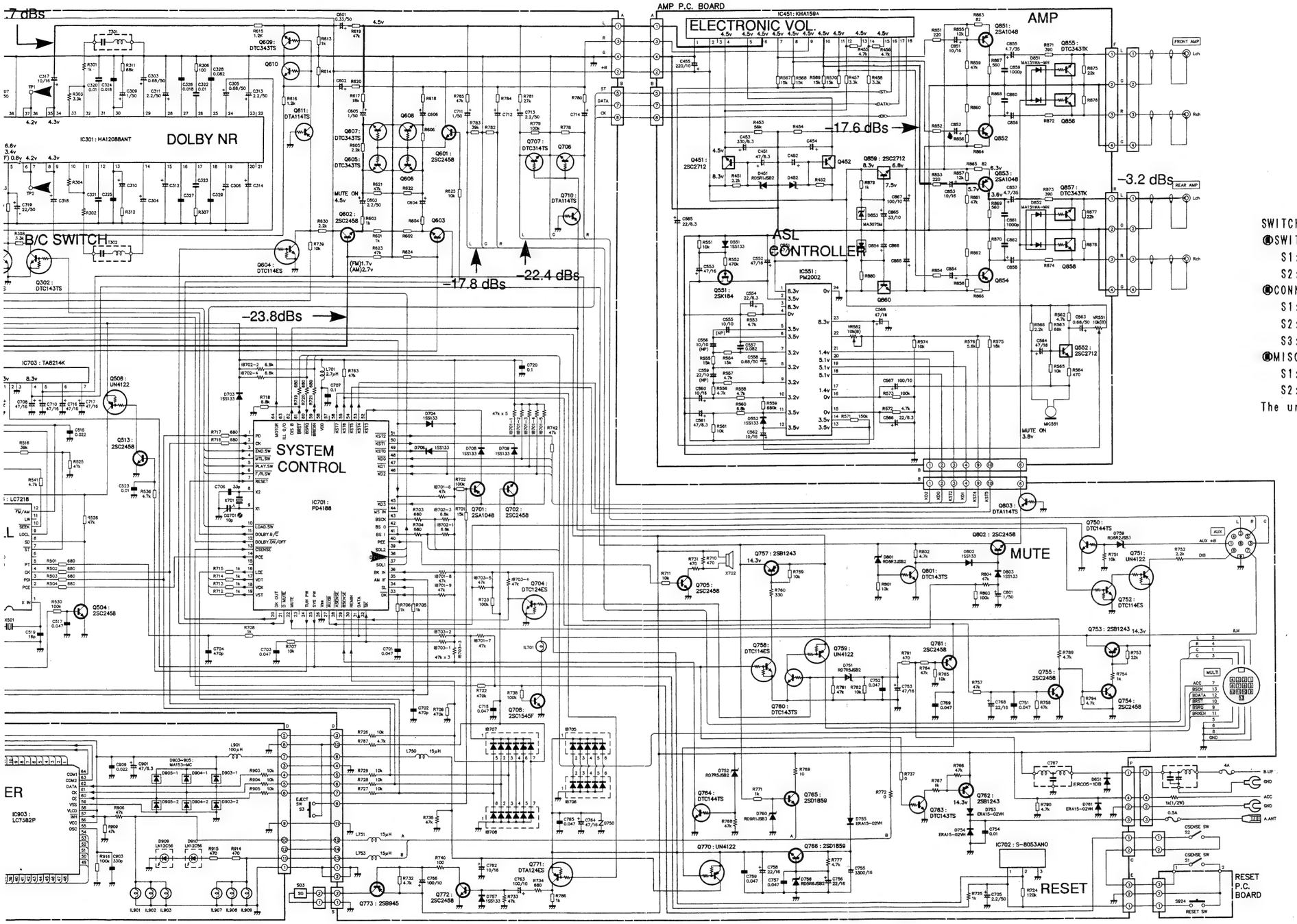


S03
S0

Fig. 28

17. SCHEMATIC CIRCUIT DIAGRAM (KEX-M800/UC)





NOTE :
- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.

SWITCHES:

Ⓐ SWITCH P.C. BOARD
- S1: METAL SWITCH ····· ON — OFF
- S2: PLAY SWITCH ····· ON — OFF

Ⓑ CONNECTOR P.C. BOARD
- S1: LOAD SWITCH ····· ON — OFF
- S2: END SWITCH ····· ON — OFF
- S3: F/R SWITCH ····· ON — OFF

Ⓒ MISCELLANEOUS
- S1: CSENSE SWITCH ····· ON — OFF
- S2: CSENSE SWITCH ····· ON — OFF

The underlined indicates the switch position.

Audio Tuner Unit
Consists of ● Amp P.C. Board ● Mother P.C. Board

Display Unit
Consists of ● Display P.C. Board ● Reset P.C. Board

Fig. 29

18. FM/AM TUNER UNIT

• KEX-M800SDK/WG, KEX-M800/EW

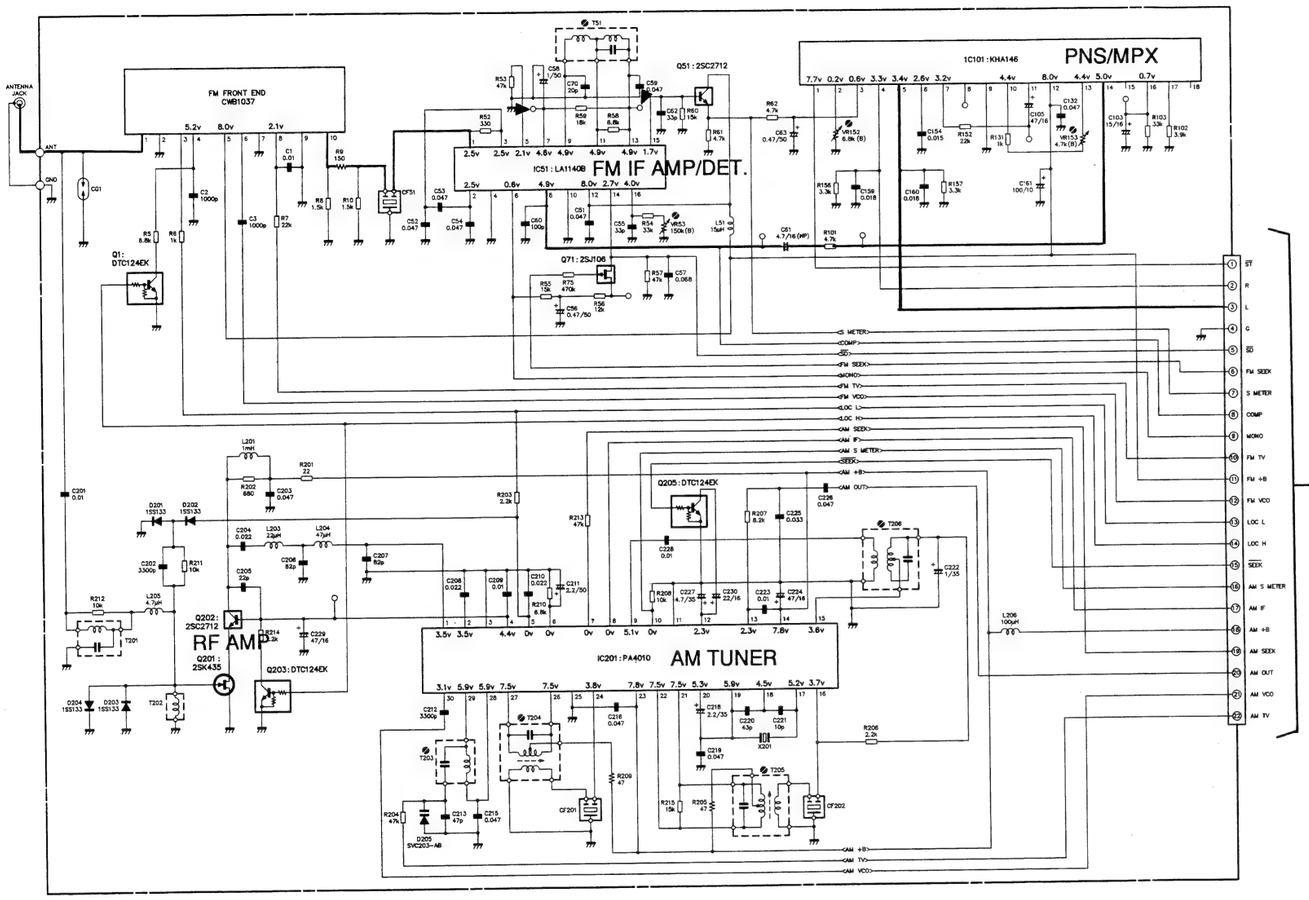
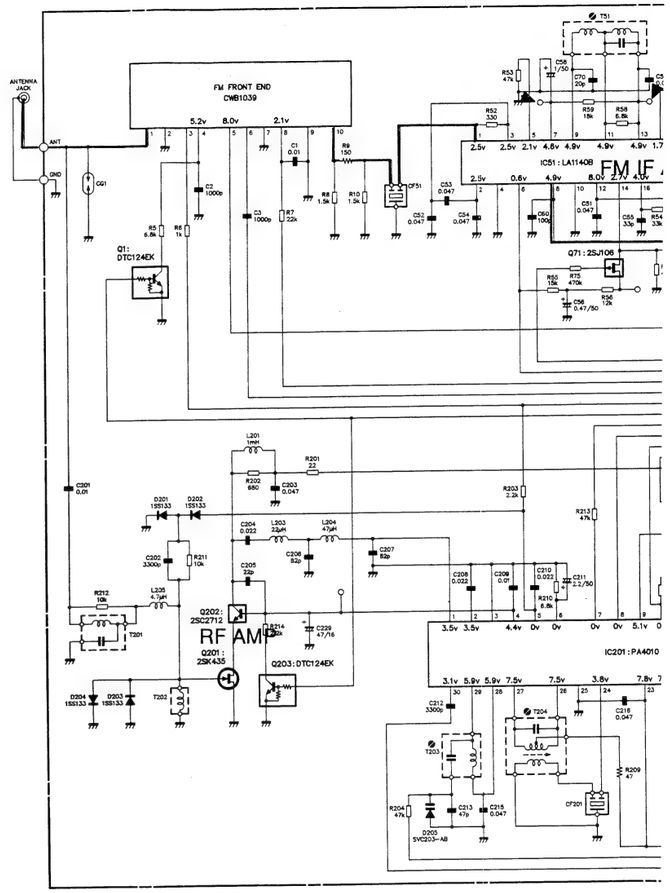


Fig. 30

• KEX-M800/ES



• KEX-M800/ES

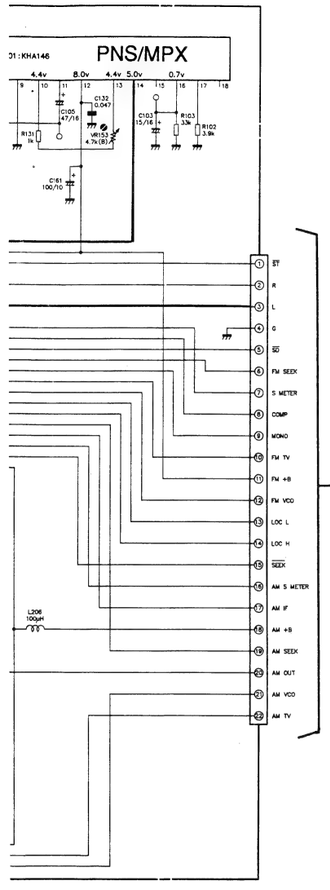


Fig. 30

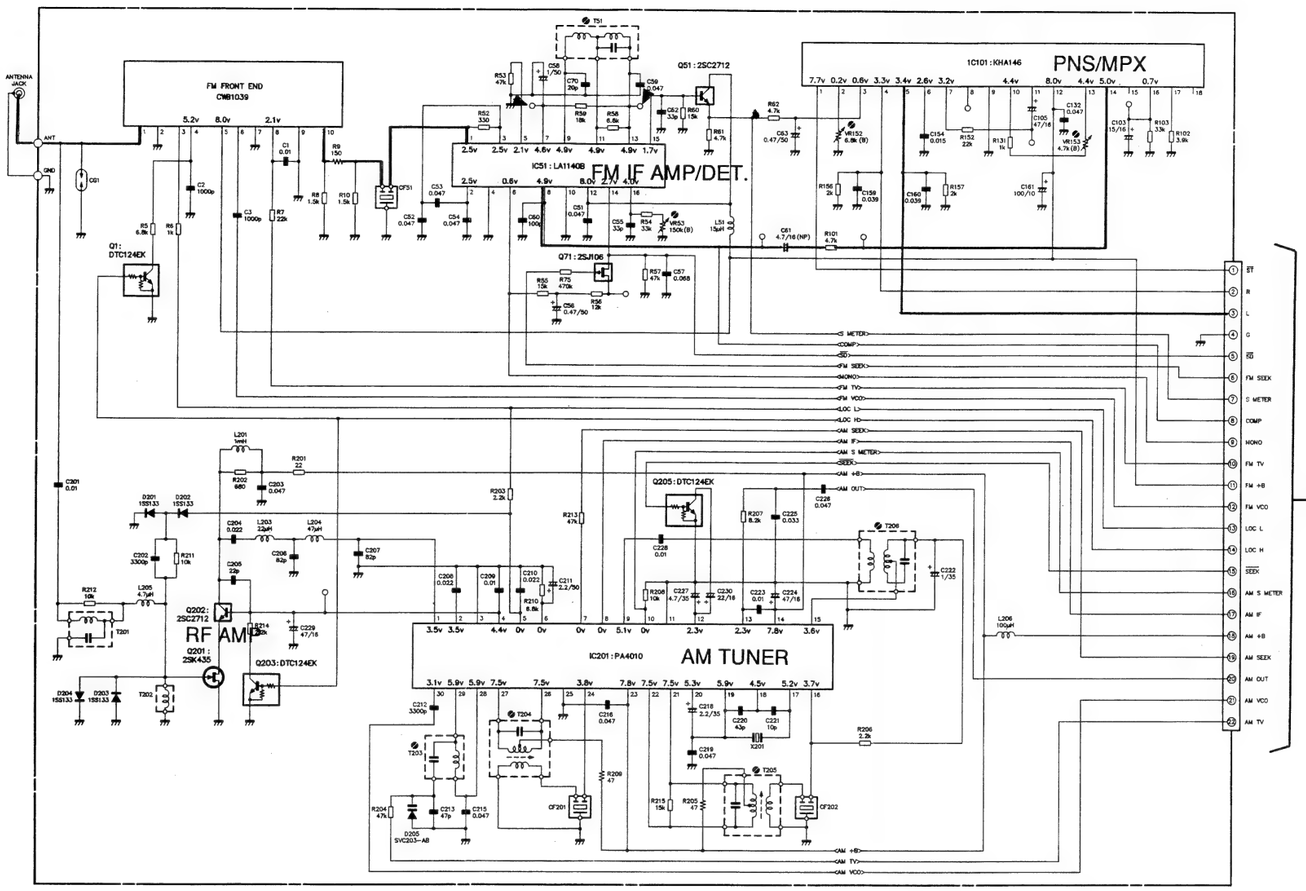


Fig. 31

• KEX-M800/UC

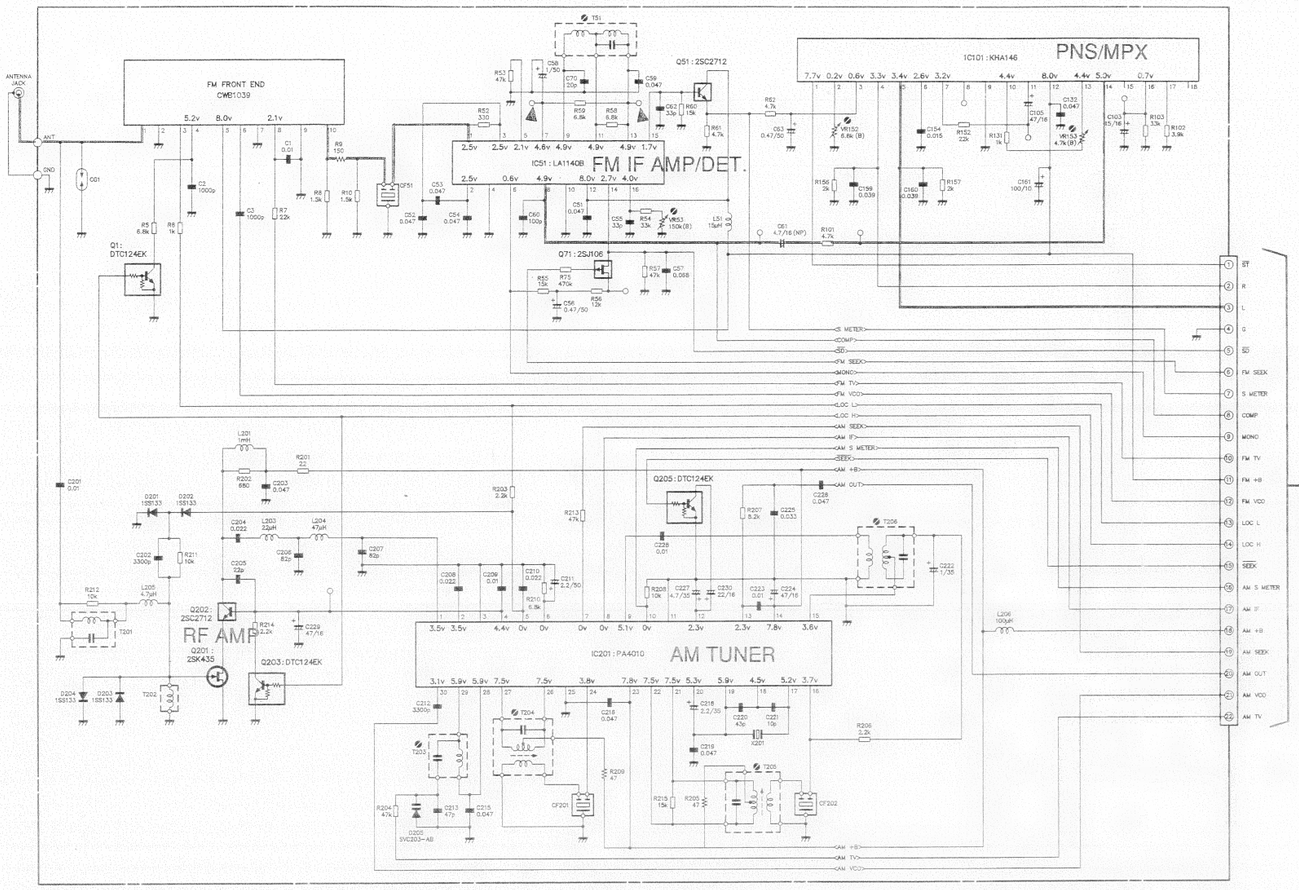
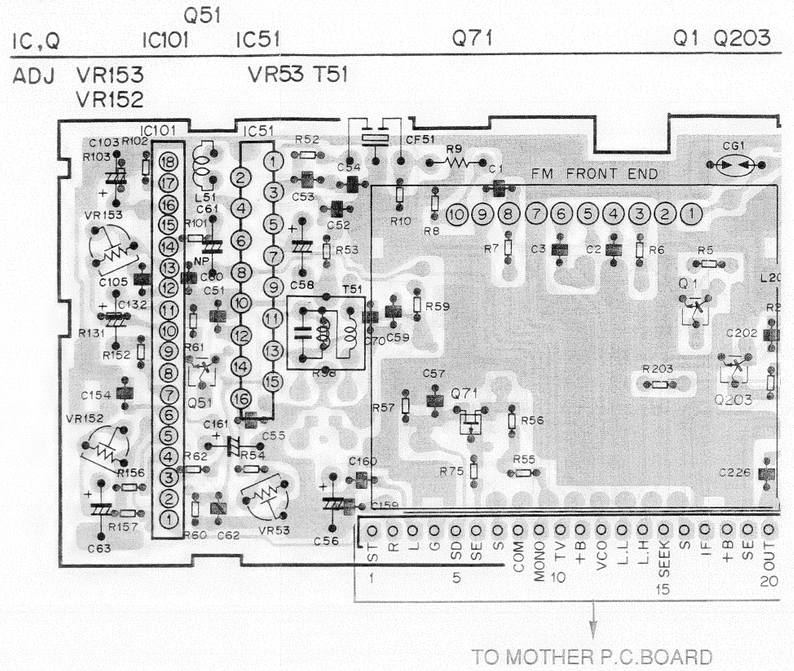


Fig. 32

• KEX-M800SDK/WG, KEX-M800/EW,
KEX-M800/ES, KEX-M800/UC



• FM FONT END (CWB1037)
KEX-M800SDK/WG, KEX-M800/EW

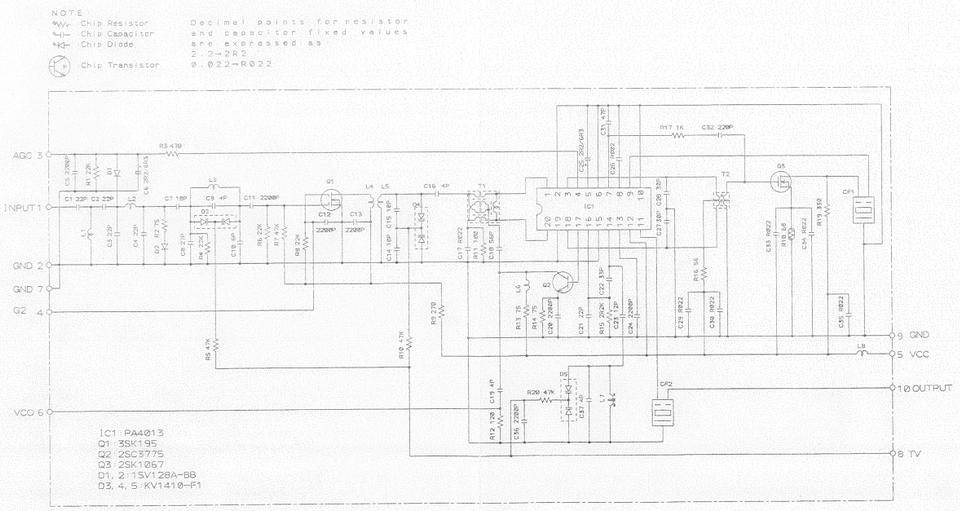


Fig. 34

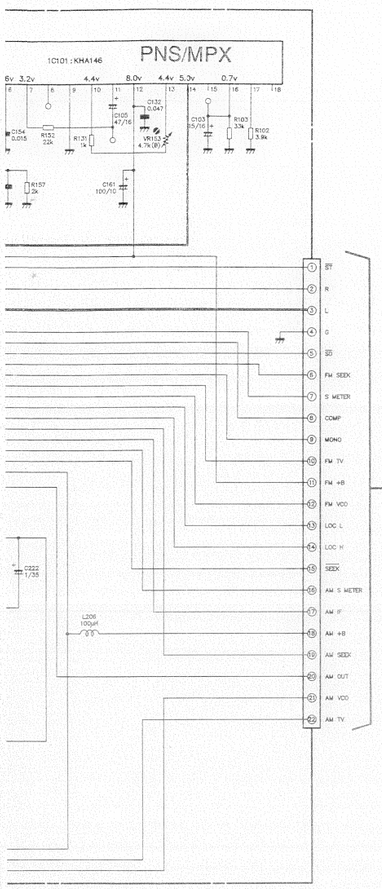


Fig. 32

• KEX-M800SDK/WG, KEX-M800/EW,
KEX-M800/ES, KEX-M800/UC

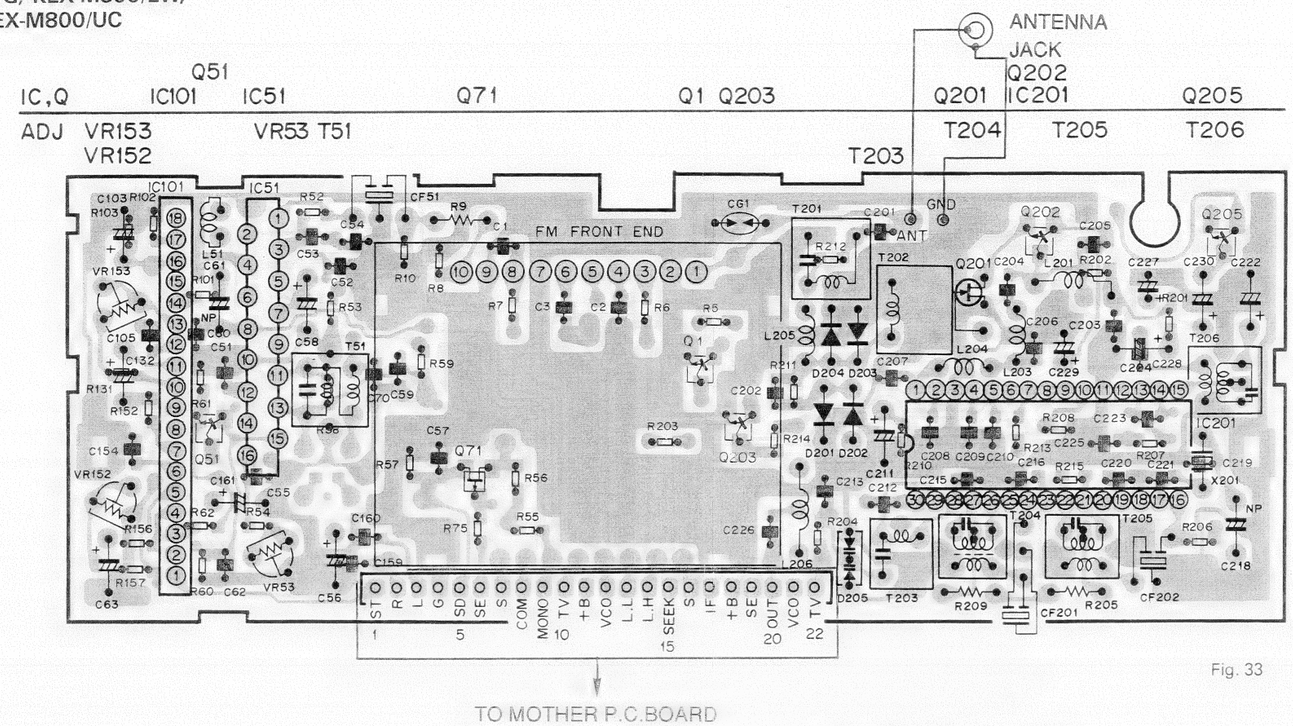


Fig. 33

• FM FONT END (CWB1037)
KEX-M800SDK/WG, KEX-M800/EW

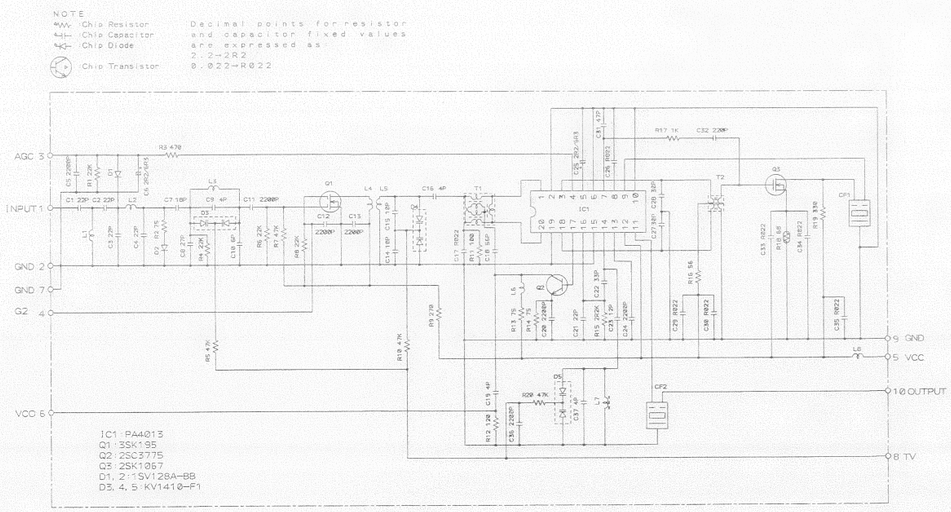


Fig. 34

• FM FONT END (CWB1039)
KEX-M800/ES, KEX-M800/UC

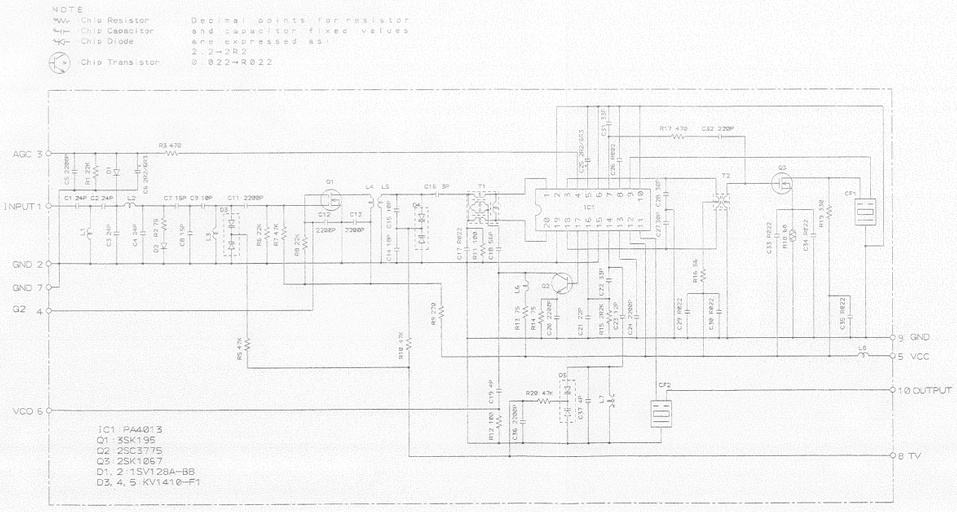


Fig. 35

19. HOLDER ASSY AND GRILLE ASSY EXPLODED VIEW

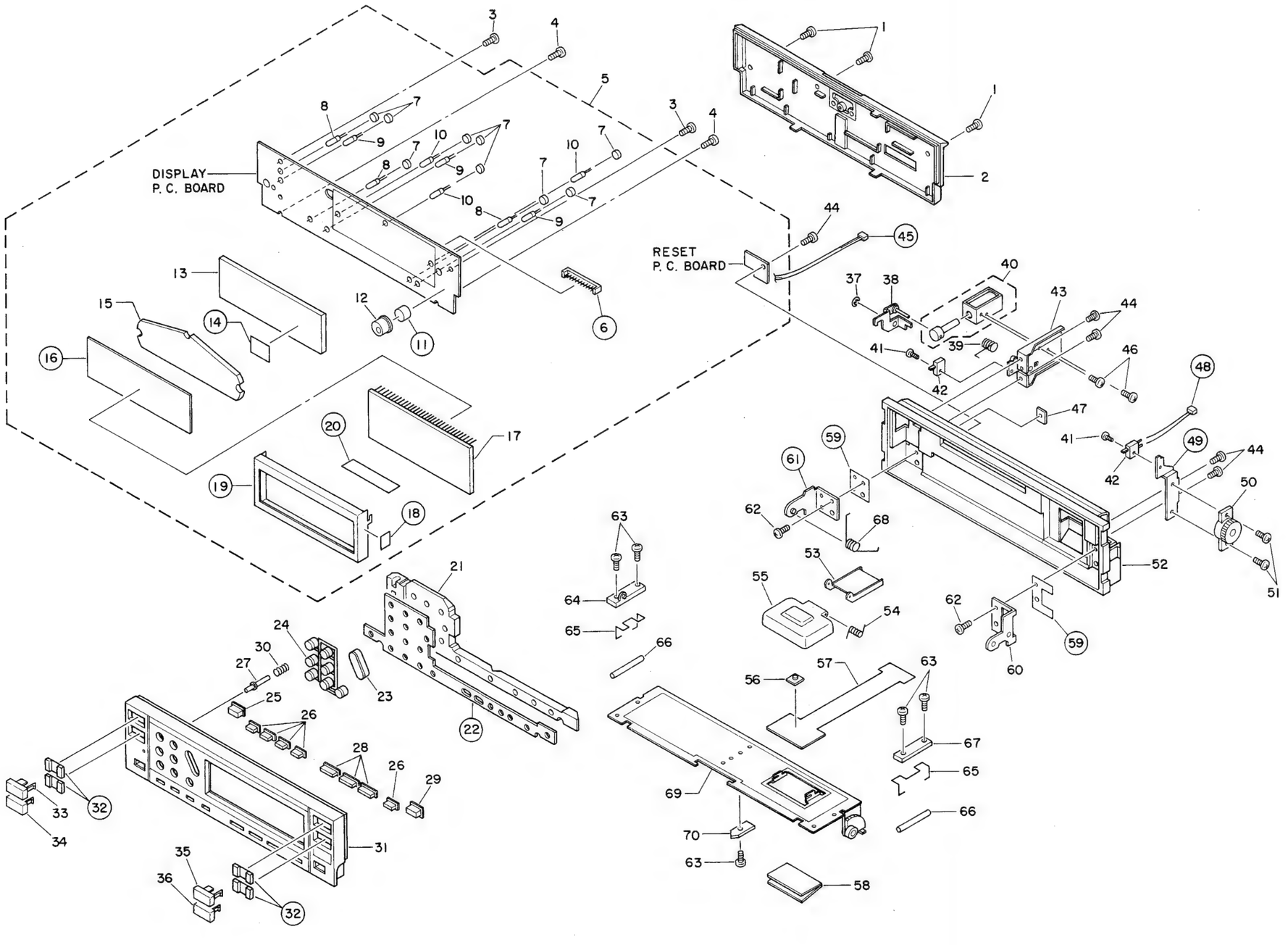


Fig. 36

• Parts List

Mark	No.	D
	1	S
	2	C
	3	S
	4	S
◉	5	D
◉		D
	6	P
	7	S
★★	8	L
★★	9	L
★★	10	L
	11	I
★★	12	I
	13	H
	14	F
	15	L
	16	P
	17	L
	18	F
	19	H
	20	I
	21	L
	22	C
★	23	B
★	24	B
★	25	B
★	26	B
★	27	B
★	28	B
★	29	B
	30	S
	31	G
		G
		G
		G
	32	C
★	33	B
★	34	B
★	35	B
★	36	B

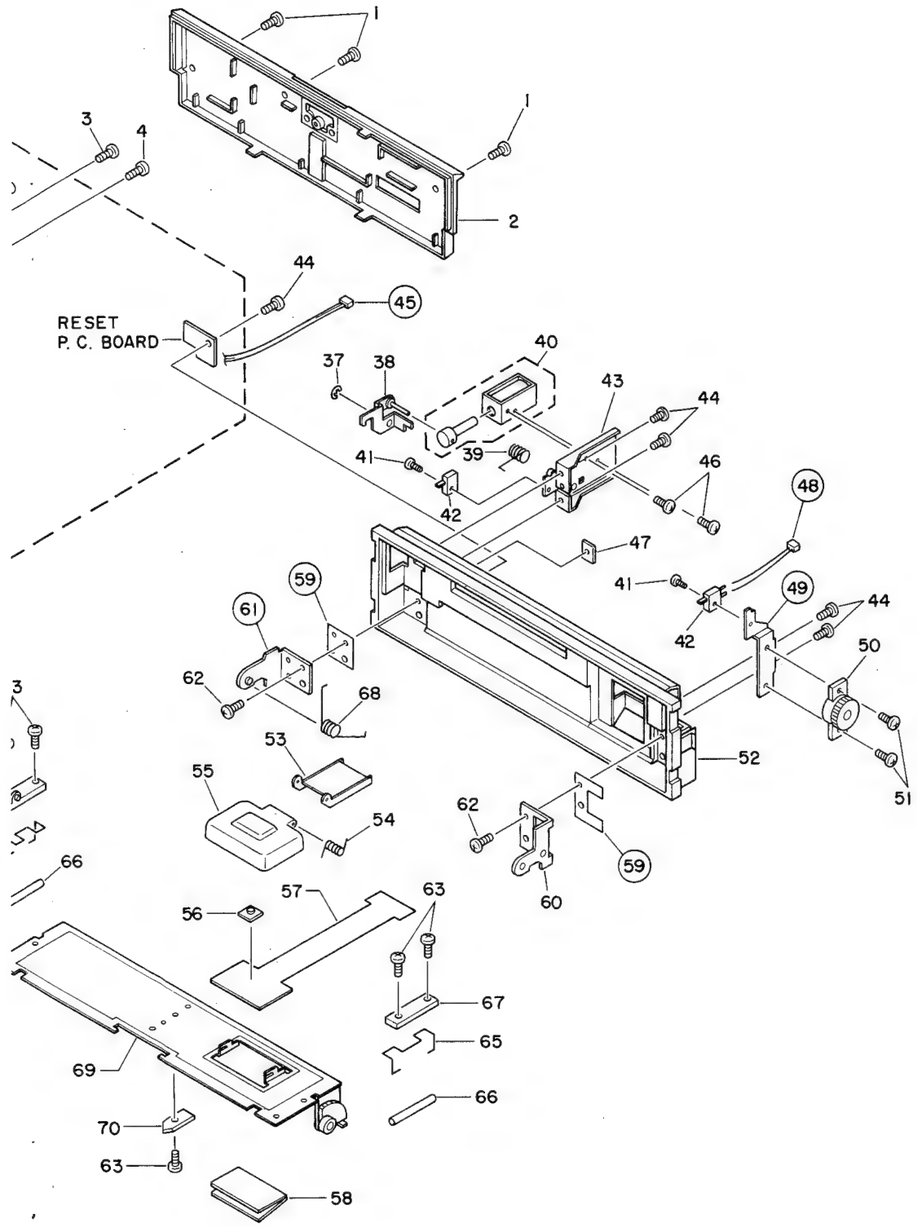


Fig. 36

• **Parts List**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw	CBA1126		37	E Type Washer	YE15FUC
	2	Cover Unit	CXA2838		38	Arm Unit	CXA2658
	3	Screw	BPZ20P060FMC		39	Spring	CBH1260
	4	Screw	BPZ20P080FMC	★	40	Solenoid	CXP1009
◉	5	Display Unit (WG, EW)	CWS1138		41	Screw	PMZ20P050FMC
◉		Display Unit (ES, UC)	CWS1144	★★	42	Switch	CSN1012
	6	Plug			43	Bracket Unit	CXA2657
	7	Spacer	CNW-662		44	Screw	BPZ20P050FMC
★★	8	Lamp	CEL1013		45	Connector	
★★	9	Lamp (WG, EW)	CEL-147		46	Screw	BMZ20P025FMC
★★	10	Lamp	CEL1112	★	47	Button	CAC2000
	11	Insulator			48	Connector	
★★	12	IC	BX-1393		49	Holder	
	13	Housing	CNV2147		50	Damper Unit	CXD-766
	14	Film			51	Screw	PMZ20P030FMC
	15	Lens	CNV2145		52	Grille Unit	CXA2901
	16	Plate			53	Door	CNV2051
	17	LCD	CAW1042		54	Spring	CBH1217
	18	Film			55	Holder Unit	CXA2902
	19	Holder		★★	56	Switch	CSG1033
	20	Insulator			57	P. C. Board	CNP2117
	21	Lens	CNV2143		58	Socket	CKS1664
	22	Cushion			59	Cushion	
★	23	Button	CAC2058		60	Holder Unit	CXA2661
★	24	Button	CAC2051		61	Holder	
★	25	Button	CAC2050		62	Screw	BPZ20P060FZK
★	26	Button	CAC2059		63	Screw	CBA1082
★	27	Button	CAC2064		64	Holder	CNV2050
★	28	Button	CAC2060		65	Spring	CBH1259
★	29	Button	CAC2063		66	Roller	CLA1706
	30	Spring	CBH1275		67	Holder	CNV2141
	31	Grille Unit (WG)	CXA2833		68	Spring	CBH1216
		Grille Unit (EW)	CXA2834		69	Holder Unit	CXA3082
		Grille Unit (ES)	CXA2836		70	Guide	CNV2052
		Grille Unit (UC)	CXA3022				
	32	Cushion					
★	33	Button	CAC2048				
★	34	Button	CAC2049				
★	35	Button	CAC2061				
★	36	Button	CAC2062				

20. CHASSIS EXPLODED VIEW

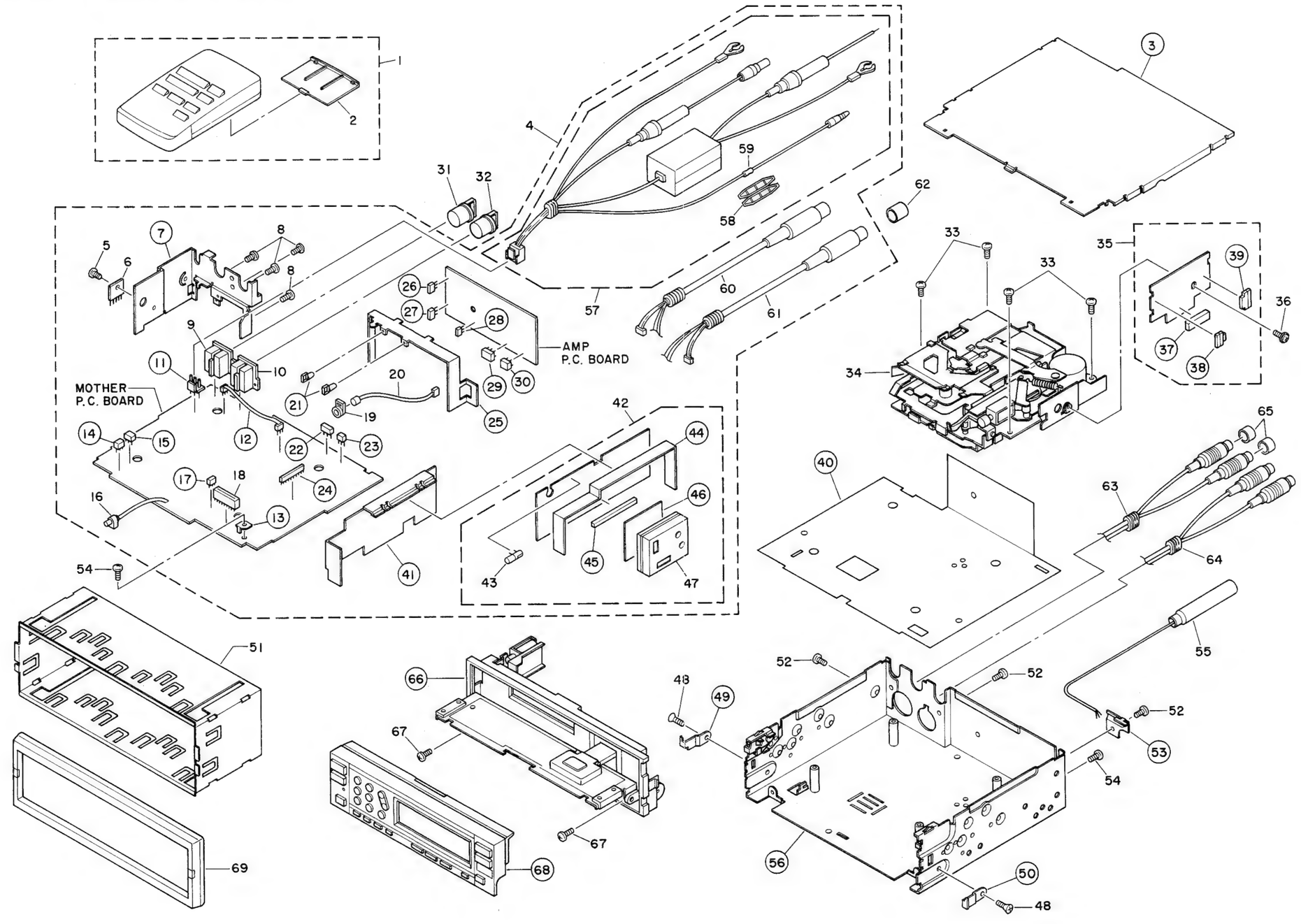


Fig. 37

• Parts List

NOTE:

- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★: GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Mark	No.	Description	Part No.
	1	Remote Control Assy (WG, EW)	CXA2860
		Remote Control Assy (ES)	CXA2958
		Remote Control Assy (UC)	CXA3090
	2	Cover	CZN3224
	3	Case	
◉	4	Audio Tuner Unit (WG)	CWM1879
◉		Audio Tuner Unit (EW)	CWM1881
◉		Audio Tuner Unit (ES)	CWM1996
◉		Audio Tuner Unit (UC)	CWM1885
	5	Screw	BMZ30P060FMC
★★	6	IC	TA8214K
	7	Holder (WG, EW)	
		Holder (ES, UC)	
	8	Screw	BMZ20P060FMC
	9	Connector	CKS1144
	10	Connector	CKS1156
	11	Plug (WG, EW)	
		Plug (ES, UC)	
	12	Connector	
	13	Holder	
	14	Plug	
	15	Plug	
★★	16	Lamp	CEL-148
	17	Plug	
	18	Plug	CKS1437
	19	Holder	CNV2196
	20	Microphone Assy	CPM1003
	21	Clamper	
	22	Plug	
	23	Plug	
	24	Connector	
	25	Holder	
	26	Plug (WG, EW)	
		Plug (ES, UC)	
	27	Plug (WG, EW)	
		Plug (ES, UC)	
	28	Connector	
	29	Connector	
	30	Connector	
	31	Cap	CNV1468
	32	Cap	CNV1308
	33	Screw	BMZ26P050FMC
◉	34	Cassette Mechanism Assy	EXK1430
◉	35	Mechanism Control Unit	CWM1968
	36	Screw	CBA1022
	37	Connector	
	38	Connector	
	39	Connector	
	40	Insulator	
	41	Shield Plate Unit	
◉	42	FM/AM Tuner Unit (WG, EW)	CWE1146
◉		FM/AM Tuner Unit (ES)	CWE1147
◉		FM/AM Tuner Unit (UC)	CWE1145
	43	Antenna Jack	CKX1010
	44	Chassis	
	45	Plug	
	46	Insulator	
	47	FM Front End (WG, EW)	CWB1037
		FM Front End (ES, UC)	CWB1039
	48	Screw	CMZ30P050FMC
	49	Holder	
	50	Holder	
	51	Holder	CNC1484
	52	Screw	BMZ30P050FMC
	53	Holder	
	54	Screw	BMZ26P040FMC
	55	Antenna Cable	CDH1093
	56	Chassis Unit (WG)	
		Chassis Unit (EW, ES, UC)	
	57	Cord (WG, EW)	CDE2455
		Cord (ES, UC)	CDE2361
	58	Resistor	RS1/2P102JL
	59	Cap	CNS1472
	60	DIN Connector Cord (REAR) (WG, EW))	CDE2358
	61	DIN Connector Cord (FRONT) (WG, EW)	CDE2357
	62	Cap (WG, EW)	CNV1455
	63	Connector (FRONT) (ES, UC)	CDE2360
	64	Connector (REAR) (ES, UC)	CDE2491
	65	Cap (ES, UC)	CNW-829
	66	Holder Assy	
	67	Screw	BMZ30P060FBK
	68	Grille Assy (WG)	
		Grille Assy (EW)	
		Grille Assy (ES)	
		Grille Assy (UC)	
	69	Panel	CNS1690

21. CASSETTE MECHANISM ASSY EXPLODED VIEW

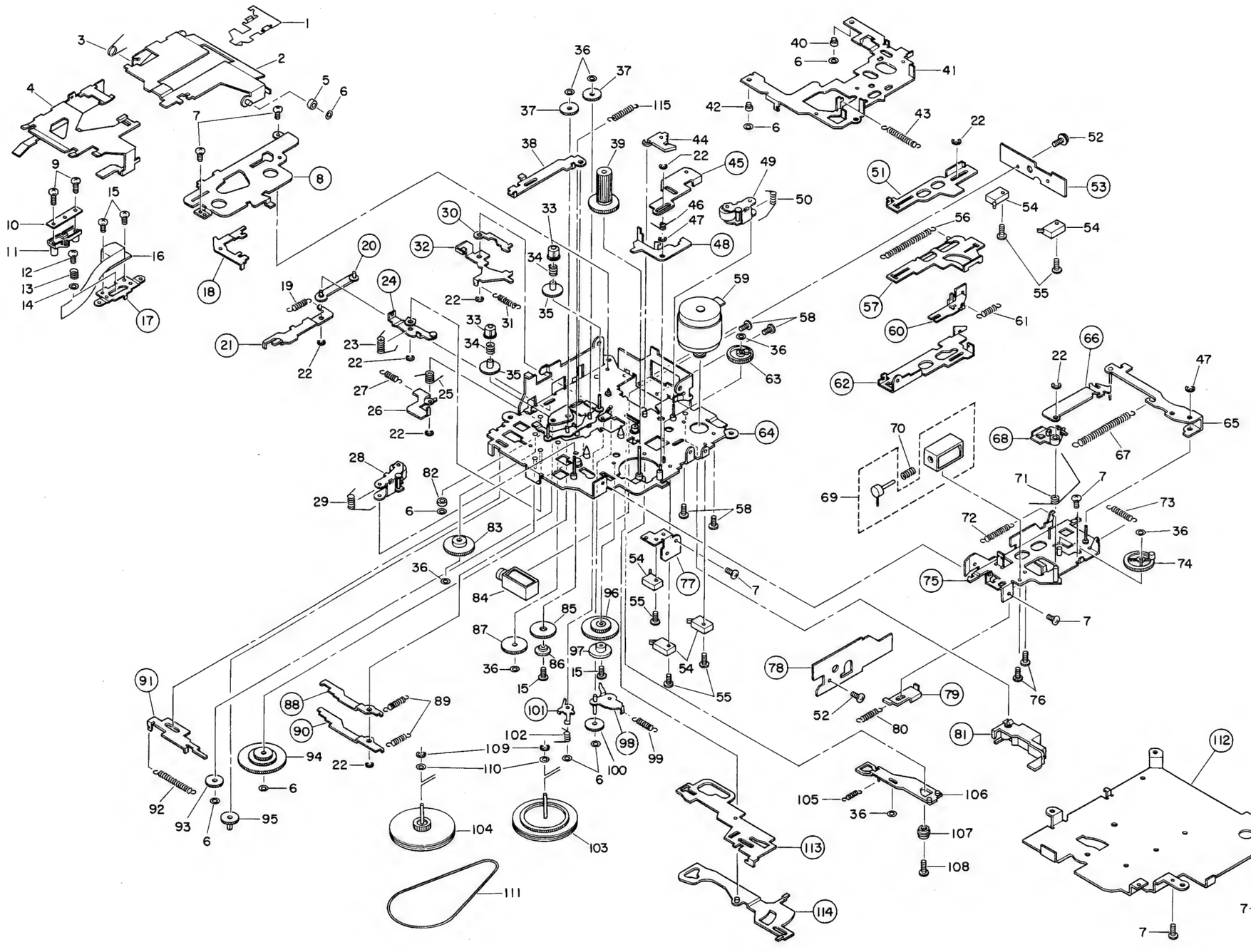


Fig. 38

• **Parts List**

Mark	No.	Description	Part No.
	1	Lever	ENV1124
	2	Arm Unit	EXA1081
	3	Spring	EBH1152
	4	Cassette Holder	ENC1165
	5	Roller	ELA1148
	6	Washer	CBF1037
	7	Screw	BMZ20P030FMC
	8	Cover	
	9	Screw	EBA1016
	10	Spring	EBL1011
	11	Spacer	ENV1105
	12	Screw	BMZ20P025FMC
	13	Spring	EBH1145
	14	Washer	EBE1005
	15	Screw	HBA-175
★★	16	Head Unit	EXA1088
	17	Arm	
	18	Arm	
	19	Spring	EBH1143
	20	Lever Unit	
	21	Arm	
	22	Washer	YE15FUC
	23	Spring	EBH1154
	24	Arm Unit	
	25	Spring	EBH1138
	26	Arm	ENV1122
	27	Spring	EBH1142
★★	28	Pinch Roller Unit	EXA1073
	29	Spring	EBH1134
	30	Arm	
	31	Spring	EBH1144
	32	Arm	
	33	Collar	ENV1117
	34	Spring	EBH1155
★★	35	Gear	ENV1116
	36	Washer	CBF1038
	37	Gear	ENV1115
	38	Lever Unit	EXA1074
	39	Gear	ENV1107
	40	Roller	ELA1146

Mark	No.	Description	Part No.
	41	Head Base Unit	EXA1071
	42	Roller	ELA1147
	43	Spring	EBH1131
	44	Arm	ENV1121
	45	Lever Unit	
	46	Spring	EBH1153
	47	Washer	YE20FUC
	48	Arm	
★★	49	Pinch Roller Unit	EXA1072
	50	Spring	EBH1133
	51	Lever	
	52	Screw	CBA1076
	53	P.C.Board	
★★	54	Switch	CSN1005
	55	Screw	CBA1070
	56	Spring	EBH1147
	57	Lever	
	58	Screw	PMS20P025FMC
★★	59	Motor Unit	EXA1089
	60	Lever	
	61	Spring	EBH1149
	62	Lever	
	63	Gear	ENV1106
	64	Chassis Unit	
	65	Arm Unit	EXA1082
	66	Arm	
	67	Spring	EBH1146
	68	Clamper	
★	69	Solenoid	EXP1004
	70	Spring	EBH1157
	71	Spring	EBH1151
	72	Spring	EBH1148
	73	Spring	EBH1135
	74	Gear	ENV1118
	75	Guide Unit	
	76	Screw	PMS20P022FUC
	77	Bracket	
	78	P.C.Board	
	79	Arm	
	80	Spring	EBH1158

Mark	No.	Description	Part No.
	81	Clamper	
	82	Roller	ELA1149
	83	Gear	ENV1111
★	84	Solenoid	EXP1003
	85	Gear	ENV1109
	86	Collar	ELA1152
	87	Gear	ENV1110
	88	Arm	
	89	Spring	EBH1136
	90	Arm	
	91	Lever	
	92	Spring	EBH1137
	93	Gear	ENV1112
	94	Gear Unit	EXA1083
	95	Gear	ENV1113
	96	Gear	ENV1108
	97	Collar	ELA1151
	98	Arm Unit	
	99	Spring	EBH1141
	100	Gear	ENV1114

Mark	No.	Description	Part No.
	101	Arm	
	102	Spring	EBH1140
	103	Flywheel	ENV1127
	104	Flywheel	ENV1128
	105	Spring	EBH1159
	106	Arm	ENV1119
	107	Collar	ELA1150
	108	Screw	HBA-183
	109	E Type Washer	CBG1003
	110	Washer	HBF-179
★★	111	Belt	ENT1011
	112	Cover	
	113	Lever	
	114	Arm Unit	
	115	Spring	EBH1139

22. ELECTRICAL PARTS LIST

NOTE:

- *For your parts Stock Control, the fast moving items are indicated with the marks ‡‡ and ‡.*
  ‡‡ : GENERALLY MOVES FASTER THAN ‡.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*
  Chip Resistor
  RS1/8S□□□J, RS1/10S□□□J
  Chip Capacitor (except for CQS.....)
  CKS....., CCS....., CSZS.....

Audio Tuner Unit
Consists of • Amp P. C. Board • Mother P. C. Board

Unit Number :
Unit Name : Audio Tuner Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
‡‡	IC 301		HA12088ANT
‡‡	IC 451		KHA159A
‡‡	IC 501 (WG)		KHA142
‡‡	IC 502 (WG)		CWW1091
‡‡	IC 503		LC7218
‡‡	IC 504		TC4069UBP
‡‡	IC 551		PM2002
‡‡	IC 701		PD4188
‡‡	IC 702		S-8053ANO
‡‡	IC 703		TA8214K
‡‡	Q 301 302		DTC143ES
‡‡	Q 451 452	Chip Transistor	2SC2712
‡‡	Q 501 (WG)		2SC2458
‡‡	Q 502 503 504 513 514 601 602 603		2SC2458
‡‡	Q 505		2SK330
‡‡	Q 506 507		2SA1150
‡‡	Q 508		UN4122
‡‡	Q 510 (EW, UC)		DTC114ES
‡‡	Q 510 (ES) 511 (ES) 604 (ES)		UN4211
‡‡	Q 511 (WG, EW, UC) 604 (WG, EW, UC)		DTC114ES
‡‡	Q 512 (WG, EW)		DTC124ES
‡‡	Q 551		2SK184
‡‡	Q 552	Chip Transistor	2SC2712
‡‡	Q 605 606 607 608 609 610		DTC343TS
‡‡	Q 611		DTA114TS
‡‡	Q 701		2SA1048
‡‡	Q 702 705 754 755 761 772 802		2SC2458
‡‡	Q 704 (WG, EW, UC)		DTC124ES
‡‡	Q 704 (ES)		UN4212
‡‡	Q 706 707		DTC314TS
‡‡	Q 708		2SC1545F
‡‡	Q 710 803		DTA114TS
‡‡	Q 750 764		DTC144TS
‡‡	Q 751 759 770		UN4122
‡‡	Q 752 (WG, EW, UC) 758 (WG, EW, UC)		DTC114ES
‡‡	Q 752 (ES) 758 (ES)		UN4211
‡‡	Q 753 757 762		2SB1243
‡‡	Q 756 (WG, EW)		UN4122
‡‡	Q 760 763 801		DTC143TS
‡‡	Q 765 766		2SD1859
‡‡	Q 767 (WG, EW)		DTC143TS
‡‡	Q 768 (WG, EW) 769 (WG, EW)		2SB1243
‡‡	Q 771		DTA124ES
‡‡	Q 773		2SB945
‡‡	Q 851 852 853 854		2SA1048
‡‡	Q 855 856 857 858	Chip Transistor	DTC343TK
‡‡	Q 859 860	Chip Transistor	2SC2712
‡	D 451 452		RD5R1JSB2
‡	D 501 (WG) 502 (WG)		1SS133
‡	D 503 504 505 506 507 601 604 605		1SS133
‡	D 509		RD2R7ESB1
‡	D 551 552 606 607		1SS133
‡	D 651		ERC05-10B
‡	D 701 (ES)		1SS133
‡	D 703 704 708 709 757 802 803		1SS133
‡	D 706 (WG, UC)		1SS133
‡	D 707 (WG)		1SS133
‡	D 750 (WG, EW)		RD7R5JSB2
‡	D 751 752		RD7R5JSB2
‡	D 753 754 755		ERA15-02VH

Mark	Circuit Symbol & No.	Part Name	Part No.
*	D 756		RD5R6JSB2
*	D 759		RD6R2JSB3
*	D 760		RD9R1JSB3
*	D 761 (ES, UC)		ERA15-02VH
*	D 801		RD8R2JSB2
*	D 851 852	Chip Diode	MA151WA-MN
*	D 853 854	Chip Diode	MA3075M
	L 501	Ferri-Inductor	LAU101K
	L 502	Ferri-Inductor	LAU220K
	L 503	Inductor	LAUR22M
	L 504 505 506	Ferri-Inductor	LAU1R0M
	L 701	Choke Coil	LAU2R7M
	L 750 751 752	Inductor	LAU150K
	L 753 (WG, EW)	Inductor	LAU150K
	T 301 302	Coil	CTF1072
	CG 701	Trimmer	CCG1002
	IB 701		CWW1280
	IB 702		CWW1290
	IB 703		CWW1293
	IB 704		CWW1276
	IB 705		CWW1185
	IB 706		CWW1128
	IB 707		CWW1291
	IB 708		CWW1292
	G 750	Surge Absorber	ERZ-C07DK220
	X 501	Crystal Resonator	CSS1030
	X 502 (WG)	Ceramic Resonator	CSS1019
	X 701	Crystal Resonator	CSS1023
	X 702	Buzzer	CPV1006
**	IL 701	Lamp 14V 40mA	CEL-148
**	VR 301 302	Semi-fixed 33kΩ (B)	CCP-381
**	VR 551 552	Semi-fixed 10kΩ (B)	VRTB6VS103
	MIC551	Microphone Assy	CPM1003
		FM/AM Tuner Unit (WG, EW)	
		FM/AM Tuner Unit (ES)	
		FM/AM Tuner Unit (UC)	

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 301 302	1kΩ (1/6W)	CCN1015
	R 303 304	3.3kΩ (1/6W)	CCN1016
	R 305	20kΩ (1/6W)	CCN1018
	R 306 307		RS1/10S101J
	R 308		RS1/10S332J
	R 309 528 536 802		RS1/10S472J
	R 310		RS1/10S682J
	R 311		RS1/8S683J
	R 312		RS1/10S683J
	R 451 452		RS1/10S222J
	R 453 454		RS1/10S563J
	R 455 (WG, EW) 456 (WG, EW)		RS1/10S0R0J
	R 455 (ES, UC) 456 (ES, UC)		RS1/10S472J
	R 457 (ES, UC) 458 (ES, UC)		RS1/10S332J
	R 501 502 503 504		RS1/10S681J
	R 505 506 542 601 602		RS1/10S102J
	R 507		RS1/10S152J
	R 508 (WG)		RS1/10S222J
	R 509 510 511 515 539 630		RS1/10S222J
	R 512 (WG)		RS1/10S472J
	R 513 514 722 753		RS1/10S223J
	R 516		RS1/10S393J
	R 517 518 519 520 619 620 621 622 623 624		RS1/10S473J
	R 521 (WG) 527 (WG) 545 (WG)		RS1/10S473J
	R 522		RS1/10S472J
	R 523 537 538 625		RS1/10S103J
	R 524 541 553 556 557 558 562 572		RS1/10S472J
	R 525 526 534		RS1/10S473J
	R 529 530		RS1/10S104J
	R 531 532		RS1/10S474J
	R 533 (WG)		RS1/10S474J
	R 543		RS1/10S0R0J
	R 544 (WG)		RS1/10S471J
	R 551 561 565 574		RS1/10S103J
	R 552		RS1/10S474J
	R 554 555		RS1/10S153J
	R 559		RS1/10S684J
	R 560		RS1/10S682J
	R 563		RS1/10S683J
	R 564		RS1/10S471J
	R 566		RS1/10S222J
	R 567 (WG, EW) 568 (WG, EW) 569 (WG, EW) 570 (WG, EW)		RS1/10S393J
	R 567 (ES, UC) 568 (ES, UC) 569 (ES, UC) 570 (ES, UC)		RS1/10S153J
	R 571		RS1/10S154J
	R 573		RS1/10S104J
	R 575		RS1/10S183J
	R 576		RS1/10S562J
	R 603 604 613 614		RS1/10S102J
	R 605 606		RS1/10S222J
	R 615 616		RS1/10S122J
	R 617 618		RS1/10S183J
	R 701		RS1/10S153J
	R 702 723 738 778 779 803		RS1/10S104J
	R 703 704 719 720 721 734		RD1/4PS681JL
	R 705 706 708 712 713 714 715 771		RS1/10S102J
	R 707 (WG)		RS1/10S102J
	R 707 (EW, ES, UC)		RS1/10S103J
	R 709		RS1/10S474J
	R 710 731		RD1/4PS471JL
	R 711 759 762 765 801		RS1/10S103J
	R 716 717		RS1/10S681J
	R 718		RS1/10S682J
	R 724		RS1/10S124J
	R 725 754 767		RD1/4PS102JL
	R 726 727 728 729 751		RD1/4PS103JL
	R 732		RS1/10S472J
	R 733 735 766 768 804		RD1/4PS473JL
	R 736 (WG, EW)		RS1/10S0R0J
	R 737 (ES, UC)		RS1/10S0R0J
	R 739		RS1/10S103J
	R 740		RS1P101JL
	R 742		RS1/10S473J
	R 752		RD1/4PS222JL
	R 755 (WG, EW) 756 (WG, EW) 788 (WG, EW)		RS1/10S472J
	R 757 758 761 763 764		RS1/10S473J
	R 760		RN1/2P471JL
	R 769		RS1P100JL
	R 772 (WG, EW) 773 (WG, EW) 775 (WG, EW)		RD1/4PS102JL
	R 772 (ES, UC)		RD1/4PS0R0JL
	R 774 (ES, UC)		RD1/4PS102JL

Mark	Circuit Symbol & No.	Part Name	Part No.
R	776 (WG, EW)		RD1/4PS223JL
R	777 787		RD1/4PS472JL
R	780 781		RS1/10S273J
R	782 783		RS1/10S393J
R	784 785 859 860 861 862		RS1/10S473J
R	786		RS1/8S102J
R	789 (ES, UC)		RD1/4PS472JL
R	790 (ES, UC) 794 (ES, UC)		RS1/10S472J
R	791 (ES, UC)		RS1/10S471J
R	792 793		RS1/10S472J
R	851 852 853 854		RS1/10S221J
R	855 (WG, EW) 856 (WG, EW) 857 (WG, EW) 858 (WG, EW)		RS1/10S393J
R	855 (ES, UC) 856 (ES, UC) 857 (ES, UC) 858 (ES, UC)		RS1/10S123J
R	863 (WG, EW) 864 (WG, EW) 865 (WG, EW) 866 (WG, EW)		RS1/10S102J
R	863 (ES, UC) 864 (ES, UC) 865 (ES, UC) 866 (ES, UC)		RS1/10S820J
R	867 (WG, EW) 868 (WG, EW) 869 (WG, EW) 870 (WG, EW)		RS1/10S471J
R	867 (ES, UC) 868 (ES, UC) 869 (ES, UC) 870 (ES, UC)		RS1/10S561J
R	871 (WG, EW) 872 (WG, EW) 873 (WG, EW) 874 (WG, EW)		RS1/10S471J
R	871 (ES, UC) 872 (ES, UC) 873 (ES, UC) 874 (ES, UC)		RS1/10S391J
R	875 876 877 878		RS1/10S223J
R	879 880		RS1/10S102J
R	881 (WG, EW)		RS1/10S103J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
C	301	470μF/10V	CCH1019
C	302	470μF/6.3V	CCH1013
C	303 304 305 306		CEAR68M50LS2
C	307 308 309 310		CEA010M50LS2
C	311 312 313 314		CEA2R2M50LS2
C	315 316		CEA4R7M35LS
C	317 318 762		CEA100M16LS2
C	319		CEA220M16LS
C	320 321 322 323		CQPA103G2A
C	324 325 326 327		CKSQYB183J50
C	328 329		CKSQYB823J25
C	451		CEA470M6R3LS
C	452		CEA470M16L2
C	453 454		CEA331M6R3L2
C	455		CEA221M10L2
C	501 (WG)		CEAR33M50LS2
C	502 (WG, EW)		CEAR47M50LS2
C	503 (WG)		CEA4R7M35LS
C	504 (WG)		CEA100M16LS2
C	505 (WG)		CEA101M10LS
C	506 (WG) 507 (WG)		CEA470M16LS
C	508	4.7μF/16V	CCH1005
C	509 (WG)		CKSQYB103K50
C	510 514 522		CKSQYB103K50
C	513 720		CKSYF104Z25
C	515		CKSQYB223K50
C	516 517 527 532 536 538 539 769		CKSQYF473Z50
C	518 (WG)		CQEA683J50
C	519		CCSQCH180J50
C	520		CCSQCH270J50
C	528 530 534 535		CKSQYF473Z50
C	531 702 704		CKSQYB471K50
C	551 552 553 568		CEA470M16L2
C	554 566		CEA220M6R3LS
C	555 556		CEA100M10NPLL
C	557		CQMA823J50
C	558 563		CEAR68M50LS2
C	559		CEA220M10NPLL
C	560 562		CEA100M16LS2
C	561		CEA470M6R3LS
C	564		CEA470M16LS
C	565 (WG, EW)		CEA100M16LS2
C	565 (ES, UC)		CEA220M6R3LS
C	567		CEA101M10LS
C	601 602		CEAR33M50LS2
C	603 604 713 714		CEA2R2M50LS2
C	605 606 711 712		CEA010M50LS2
C	607		CEA221M10L2
C	701 703 715 751 752 757 759 765		CKSQYF473Z50
C	705		CEA2R2M50LS2
C	706		CCSQCH330J50
C	707		CKSYF104Z25
C	708 710 716 717		CEA470M16L2
C	709		CEA221M10L2
C	750 (WG, EW)		CKSQYB223K50
C	753		CEA470M16LS
C	754		CKSYB103K50
C	755		CEA332M16L2
C	756 758 768		CEA220M16LS
C	763 766		CEA101M10LS
C	764		CEA470M16L2
C	767		CCG-081
C	801		CEA010M50LS2
C	851 (WG, EW) 852 (WG, EW) 853 (WG, EW) 854 (WG, EW)		CEA4R7M35LS
C	851 (ES, UC) 852 (ES, UC) 853 (ES, UC) 854 (ES, UC)		CEA100M16LS2
C	855 (WG, EW) 856 (WG, EW) 857 (WG, EW) 858 (WG, EW)		CEA2R2M50LS2
C	855 (ES, UC) 856 (ES, UC) 857 (ES, UC) 858 (ES, UC)		CEA4R7M35LS
C	859 860 861 862		CKCYB102K50
C	863 (WG, EW)		CKCYB102K50
C	864 (WG, EW)		CKSQYB102K50
C	865 866		CEA330M10LS
C	867 868		CEA101M10LS

Unit Number :
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 51		LA11408
**	IC 101		KHA146
**	IC 201		PA4010
**	Q 1 203 205	Chip Transistor	DTC124EK
**	Q 51 202	Chip Transistor	2SC2712
**	Q 71	Chip Transistor	2SJ106
**	Q 201		2SK435
*	D 201 202 203 204		1SS133
*	D 205	Variable Capacitance Diode	SVC203-AB
	L 51	Inductor	LAU150K

EX-M800

Mark	Circuit Symbol & No.	Part Name	Part No.
	L 201 (WG, EW)	Inductor	CTF1084
	L 201 (ES, UC)	Ferri-Inductor	CTF1026
	L 203	Ferri-Inductor	LAU220K
	L 204	Ferri-Inductor	LAU470K
	L 205	Ferri-Inductor	LAU4R7K
	L 206	Ferri-Inductor	CTF-157
	T 51	Coil	CTC1029
	T 201	Coil	CTB1020
	T 202	Coil	CTB1004
	T 203	Coil	CTB1040
	T 204	Coil	CTE1025
	T 205	Coil	CTE1026
	T 206	Coil	CTE1027
	CG 1	Surge Protector	DSP-201M-S00B
	CF 51	Ceramic Filter	CTF-182
	CF 201	Ceramic Filter	CTF1041
			(CTF1027)
	CF 202	Filter	CTF1085
			(CTF-100)
	X 201	Crystal Resonator	CSS1014
**	VR 53	Semi-fixed 150kΩ (B)	VRTB4VS154
**	VR 152	Semi-fixed 6.8kΩ (B)	VRTB4VS682
**	VR 153	Semi-fixed 4.7kΩ (B)	VRTB4VS472
		FM Front End (WG, EW)	CWB1037
		FM Front End (ES, UC)	CWB1039

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 5 58 210		RS1/10S682J
	R 6 131		RS1/10S102J
	R 7 152		RS1/10S223J
	R 8 10		RS1/10S152J
	R 9		RD1/4PS151JL
	R 52		RS1/10S331J
	R 53 57 204 213		RS1/10S473J
	R 54 103		RS1/10S333J
	R 55 60 215		RS1/10S153J
	R 56		RS1/10S123J
	R 59 (WG, EW, ES)		RS1/10S183J
	R 59 (UC)		RS1/10S682J
	R 61 62 101		RS1/10S472J
	R 75		RS1/10S474J
	R 102		RS1/10S392J
	R 156 (WG, EW) 157 (WG, EW)		RS1/10S332J
	R 156 (ES, UC) 157 (ES, UC)		RS1/10S202J
	R 201		RS1/10S220J
	R 202		RS1/10S681J
	R 203 206 214		RS1/10S222J
	R 205 209		RD1/4PS470JL
	R 207		RS1/10S822J
	R 208 211 212		RS1/10S103J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 1 201 209 223 228		CKSQYB103K25
	C 2 3		CKSQYB102K50
	C 51 52 53 54 59 132 203 215 216 219		CKSQYF473Z50
	C 55 62		CCSQSL330J50
	C 56 63		CEAR47M50LS2
	C 57		CKSYB683K25
	C 58		CEA010M50LS2
	C 60		CCSQSL101J50
	C 61		CEA4R7M16NPLL
	C 70		CCSQCH200J50
	C 103		CEA150M16LS
	C 105 224		CEA470M16LS
	C 154		CKSQYB153K25
	C 159 (WG, EW) 160 (WG, EW)		CKSQYB183K25
	C 159 (ES, UC) 160 (ES, UC)		CKSQYB393K25
	C 161		CEA101M10LS
	C 202 212		CKSQYB332K50
	C 204 208 210		CKSQYB223K25
	C 205		CCSQCH220J50
	C 206 207		CCSQCH820J50
	C 211		CEA2R2M50LS2
	C 213		CCSQCH470J50
	C 218		CEA2R2M35NPLL
	C 220		CCSQCH430J50
	C 221		CCSQCH100D50
	C 222		CSZA010K35L
	C 225		CKSQYB333K25
	C 226		CKSQYF473Z50
	C 227		CEA4R7M35LS
	C 229		CEA470M16LS
	C 230		CEA220M16LS

Unit Number :

Unit Name : Mechanism Control Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 1		BA3430FS
**	Q 1	Chip Transistor	2SC4116
**	Q 2	Chip Transistor	DTC143ZU
**	Q 3	Chip Transistor	DTBL13ZP
**	Q 4 6	Chip Transistor	2SC3295
**	Q 5 7	Chip Transistor	2SB1441JU

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 1 2 3 4		RS1/10S153J
	R 5 6 13		RS1/10S181J
	R 7 8		RS1/10S334J
	R 9 10		RS1/10S133J
	R 11 12		RS1/10S183J
	R 14		RS1/10S270J
	R 15		RS1/10S823J
	R 16 21 26		RS1/10S473J
	R 17		RS1/10S333J
	R 18 19		RS1/10S224J
	R 20 24 25 29		RS1/10S103J
	R 22 23 27 28		RS1/8S221J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 1 2 3 4		CKSQYB391K50
	C 5 6	22μF/6.3V	CCH1065
	C 7 8 14		CKSQYB103K50
	C 9		CKSQYB152K50
	C 10 12		CKSYB104K25
	C 11	6.8μF/25V	CCH1066
	C 13	100μF/6.3V	CCH1067
	C 15 16	4.7μF/25V	CCH1064

Display Unit

Consists of
- Display P.C. Board
- Reset P.C. Board

Unit Number :
Unit Name : Display Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
**	IC 901		S-80740AH
**	IC 902		BX-1393
**	IC 903		LC7582P
**	IC 904		PD4189
**	Q 901	Chip Transistor	DTC144EK
**	Q 902	Chip Transistor	2SC2712
*	D 901 903 904 905	Chip Diode	MA153-MC
*	D 909 910	LED	LN12C56
	L 901	Ferri-Inductor	LAU101K
	X 901	Ceramic Resonator	CSS1050
**	S 901 902 903 904 905 906 907 908 909 910	Switch	CSG-253
**	S 911 912 913 914 915 916 917 918 919 920	Switch	CSG-253
**	S 921 922 923 924	Switch	CSG-253
**	IL 901 902 903	Lamp 8V 60mA	CEL1112
**	IL 904(WG, EW) 905(WG, EW) 906(WG, EW)	Lamp 14V 40mA	CEL-147
**	IL 907 908 909	Lamp 14V 40mA	CEL1013
		LCD	CAW1042

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	R 901 902 904 905		RD1/4PS103JL
	R 906		RD1/4PS333JL
	R 907		RS1/10S470J
	R 908		RS1/10S223J
	R 909		RS1/8S473J
	R 910 911		RS1/10S473J
	R 912(WG, EW) 913(WG, EW)		RS1/8S471J
	R 914 915 919 920 921		RS1/8S471J
	R 916		RS1/10S104J
	R 917 918 922 923 924 925 926 927		RS1/10S471J
	R 930		RS1/10S103J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
	C 901 902		CEA470M6R3LS
	C 903		CKSQYB331K50
	C 904 905 906 907 908		CKSQYB152K50
	C 909		CKSQYB223K50
	C 910		CKSYB103K50
	C 911 912		CKSQYB103K50
	C 913 914		CCSQCH221J50

Unit Number :
Unit Name : Connector P.C. Board

Mark	Circuit Symbol & No.	Part Name	Part No.
*	D 1 2		F1SR35-100A
**	S 1 2 3	Switch(LOAD, END, F/R)	CSN1005

Unit Number :
Unit Name : Switch P.C. Board

Mark	Circuit Symbol & No.	Part Name	Part No.
**	S 1 2	Switch(METAL, PLAY)	CSN1005

Miscellaneous Parts List

Mark	Circuit Symbol & No.	Part Name	Part No.
**	S 1 2	Switch(CSENSE×2)	CSN1012
**	S 3	Switch(EJECT)	CSG1033
*	SO 1	Solenoid	CXP1003
*	SO 2	Solenoid	CXP1004
*	SO 3	Solenoid	CXP1009
**	HD 1	Head Unit	EXA1088
**	M 1	Motor Unit	EXA1089

23. PACKING METHOD

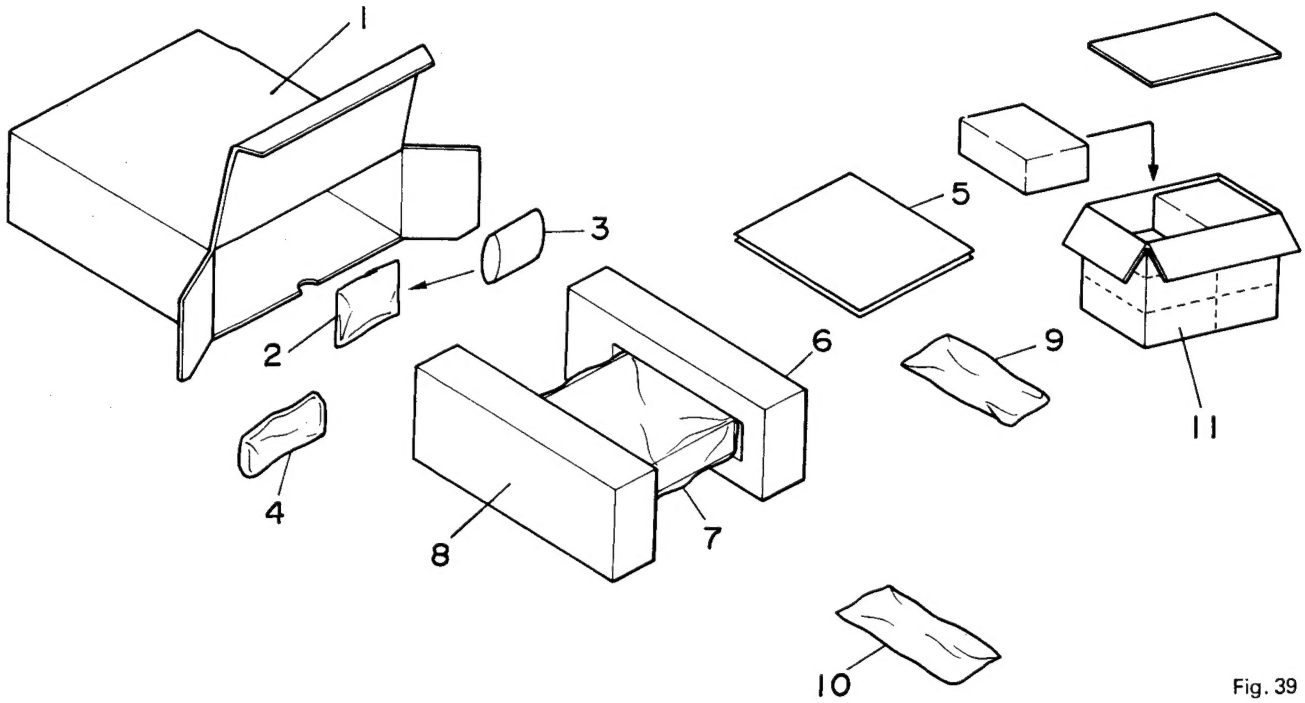


Fig. 39

• Parts List

Mark	No.	Description	Part No.
	1	Carton (WG)	CHG1595
		Carton (EW)	CHG1594
		Carton (ES)	CHG1622
		Carton (UC)	CHG1593
	2	Remote Control Assy (WG, EW)	CXA2860
		Remote Control Assy (ES, UC)	CXA2958
	2-1	Cover	CZN3224
	3	Air Cushioned Bag	CEG1055
	4-1	Battery	CEX1006
	4-2	Fastener (Rough Surface)	CNM1716
	4-3	Fastener (Soft Surface)	CNM1717
	5-1	Owner's Manual (WG)	CRD1288
		Owner's Manual (EW) (English, French, German, Spanish)	CRD1286
		Owner's Manual (EW) (Swedish, Norwegian, Dutch, Finnish)	CRD1287
		Owner's Manual (ES)	CRD1300
		Owner's Manual (UC)	CRD1289
	5-2	Caution Card (WG, EW)	
		Caution Card (ES, UC)	
	5-3	Caution Card (WG)	
	5-4	Card (WG, EW)	
		Card (UC)	
	5-5	Passport (WG)	
	6	Styrofoam (R)	CHP1212
	7	Cover	CEG1043
	8	Styrofoam (L)	CHP1211
	9	Accessory Assy (WG, EW)	CEA1426
		Accessory Assy (ES, UC)	CEA1460
	9-1	Spring (× 2)	CBH-865
	9-2	Cord (× 1)	CDE1289
	9-3	Bush (× 1)	CNV1009
	9-4	Strap (× 1)	CNF-111
	9-5	Handle (× 2)	CNC1631
	9-6	Cap (× 2)	CNV2156
	9-7	Screw Assy	
	9-7-1	Screw (× 1)	CBA-102
	9-7-2	Screw (× 1)	CBA1002
	9-7-3	Screw (× 2)	CBA1116
	9-7-4	Nut (× 2)	NF50FMC
	9-7-5	Screw (× 1) (ES, UC)	HMF40P080FUC
	10	Panel	CNS1690
	11	Contain Box (UC)	CHL1593